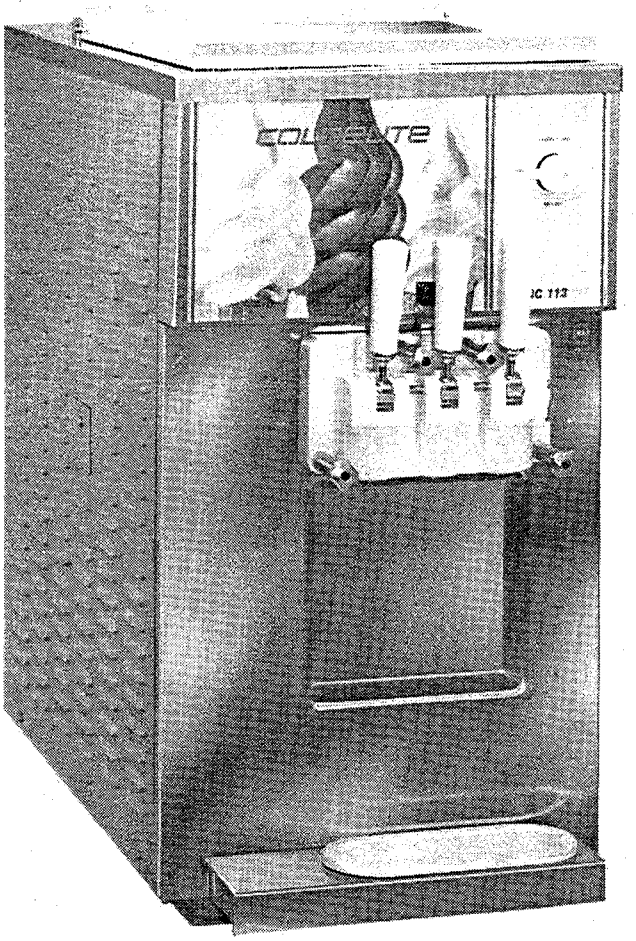
COLDELITE®



UC-113G/B

Soft Serve Freezer

DOUBLE FLAVOR COUNTER MODEL

OPERATION & SERVICE MANUAL

COLDELITE CORPORATION OF AMERICA

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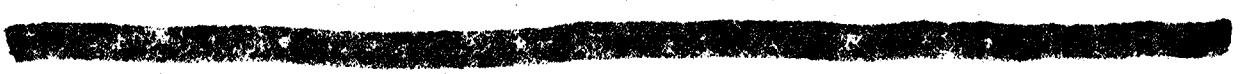


FOREWORD

Thank you for selecting Coldelite to meet today's fast growing demands. Your Coldelite freezer has been manufactured at one of the most modern freezer manufacturing plants in the U.S.A., our Lodi, New Jersey facility, utilizing the most advanced equipment and technology available in the industry. We, at Coldelite, take great pride and care in the manufacture of each and every freezer, using only the finest components available, to provide you with years of trouble-free operation.

Over twenty-five years of experience in the manufacturing of dispensing equipment have guided us in the preparation of this Operation and Service Manual. PLEASE READ IT CAREFULLY. Keep it for future reference and most of all, follow the instructions from the very time your machine is delivered.

On the following pages, you will find important information and procedures which describe the proper installation, sanitizing, operation and maintenance of your Coldelite machine. We feel certain that your full compliance with these instructions will assure you of excellent performance, trouble-free operation and a profitable business for years to come.

INDEX

Page

FOREWORD 1

PART I INSTALLATION 5
A) Uncrating 5
B) Positioning the Machine 5
C) Machines Equipped with Water Cooled Condensers ... 5
D) Electrical Requirements 6
E) Completing the Installation 7

PART II EXPLANATION OF CONTROLS 7
A) The Selector Switch 7
B) Low Mix Level Indicator 8
C) The Dispense Handles 8
D) Electric Control Panel 8
E) Other Controls 9

PART III INITIAL CLEANING PROCEDURE 10

PART IV ASSEMBLING THE FREEZER 14
A) Assembling the Beater/Augers 14
B) Assembling the Dispensing Head 15
C) Assembling the Gravity Feed Tubes 17

PART V SANITIZING THE FREEZER 18

PART VI STARTING THE FREEZER 20

PART VII OPERATING THE FREEZER 21

PART VIII ROUTINE, PERIODIC CLEANING PROCEDURES 22

PART IX TECHNICAL INFORMATION 24
A) Refrigeration 24
B) Beater Motor 24
C) Drive System 25

PART X MAINTENANCE 25
A) Trouble Shooting Guide 26
B) Wiring Guide 27
C) Parts Identification 28

Important

Failure to closely follow operational and maintenance procedures may result in damage to the unit and/or void your warranty. Coldelite Corporation will not be responsible for any machine not properly maintained.

In the event this unit should malfunction, please contact your Coldelite Distributor or an authorized service agency.

PART I
INSTALLATION

Before starting this procedure, make sure the shipping case does not show any evidence of having been dropped, tampered with or abused in such a way as to indicate that its contents may have been damaged in transit.

IMPORTANT: Should the outside of the shipping case give any indication of possible hidden damage, state this on the bill of lading before signing. Contact the carrier immediately and request an inspection of damage. If this procedure is not adhered to, you will forfeit your right to file a damage claim and be responsible for subsequent repair costs.

A) Uncrating

Proceed, as follows:

1) The case is secured to the skid with plastic strapping. When you cut this strapping, do it with caution, as it may spring out. Remove case by lifting it straight up and away from the machine.

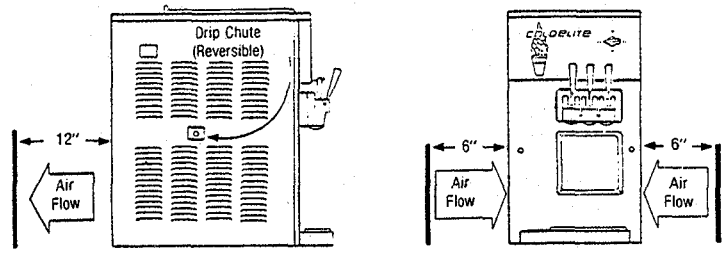
2) The freezer is also secured to the skid with plastic strapping. Exercise caution and cut this strapping to free the machine from the skid.

3) Remove the single screw at the bottom of each side panel. Remove the panels by sliding upward slightly, then pull outward at the bottom and allow the panel to slide down. The protective plastic coating which is laminated to the panels can now be removed by simply peeling off.

B) Positioning the Machine

1) The freezer is now ready to be positioned onto your counter. The counter must be capable of supporting 341 lbs. and should be vibration free. Reinforce it, if necessary. Remember when choosing a location, if your unit is air cooled, proper air flow will need to be maintained. Allow at least 6 inches on either side and a minimum of 12 inches between the rear of the machine and any obstruction. (Ref. Fig. 1)

NOTE: If these clearances are not maintained, the production capacity will be reduced, cycling will increase and the potential will exist that the machine will stop completely.



Side View UC-113G(B) Front View UC-113G(B)

Figure 1
Clearances Required for Air Cooled Models

2) If the unit is water cooled, it should be located within six feet of the water supply and drain.

3) The machine should also be within six feet of the power supply (a plug and receptacle or unfused disconnect).

4) Position the machine for easy accessibility for cleaning, servicing and maintenance.

5) Position the machine away from direct sunlight. For every 2°F over 68°F, the machine's performance will decrease by approximately 1%.

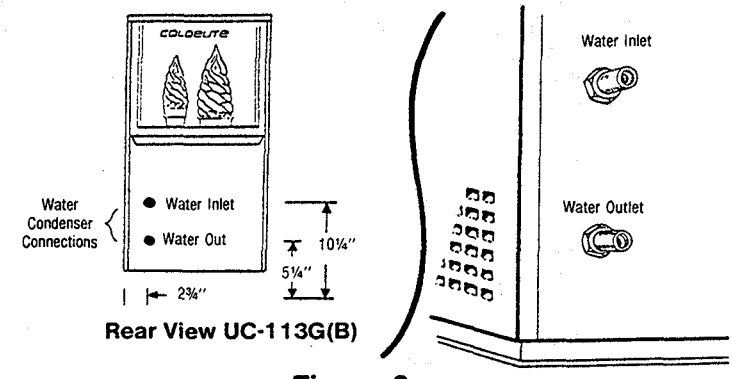
6) Once the machine is set in position, it should be leveled as accurately as possible.

C) Machines Equipped with Water Cooled Condensers

Machines equipped with water cooled condensers must be connected to a water line (cold) which can maintain a pressure of at least 35 psi, and a flow rate equal to the estimated consumption of 1 gallon per minute when the compressor is running.

Connect the fitting marked "water in" to the cold water supply, preferably with a shut-off valve, and connect the fitting marked "water out" to the drain. (Ref. Fig. 2)

All plumbing must meet local and state plumbing codes. In some cases, the use of high pressure flexible hose with a pressure rating of at least 120 psi may be used. This will facilitate moving the machine for cleaning, maintenance, etc.



Rear View UC-113G(B)

Figure 2
1/2" M.P.T. Plumbing Connections for Water Cooled Models

Water Valve Adjustment

The water valve is preset at the factory. If an adjustment should be required, proceed as follows:

To maintain a head pressure of 220 psi ± 5 psi, while the compressor is running, attach a refrigeration high pressure gauge to the compressor's high side discharge port. Open the valve clockwise to increase the pressure or counter clockwise to decrease the pressure. (Ref. Fig. 3). This adjustment, if needed, should be performed by a refrigeration technician.

Estimated water consumption is 36 gallons per hour. This figure will increase if the water temperature is over 68°F.

Warning!

Never expose a water cooled machine to temperatures at or below 32°F without having first drained the water from the condenser.

To drain, high pressure air should be blown through the condenser from the water inlet while the compressor is running (so water valve is open). This operation should be performed by a refrigeration technician.

If this drainage is not properly performed, serious damage to the refrigeration system can occur.

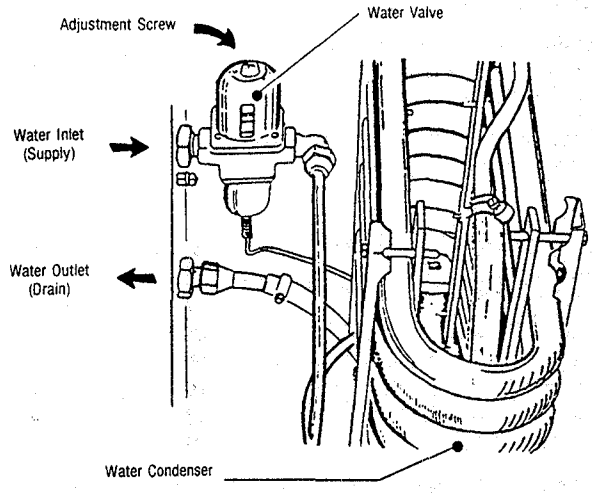


Figure 3

D) Electrical Requirements

All wiring installed to operate this freezer must be in accordance with the National Electrical Code and/or local electrical codes, rules and regulations. The machine must be properly grounded. It is recommended the power supply be installed by a licensed electrician.

Voltage UC113G/B: 220 Volts

Running Amperage FLA: 17.1 Amps.

Fuse Size: 30 Amp. Max.

Wire Size (50 Ft. Max.): #8

Power Supply must be adequate to meet requirements at all times. Voltage fluctuations, with the machine in operation, should not exceed ± 5% of the normal or rated voltage.

Adequate Wiring must be provided with respect to wire size or gauge. Unless otherwise required by the local Electrical Code, the same size wire gauge at the machine junction box should be used for the direct power line. A separate circuit breaker with adequate fuse protection should be employed.

An unfused disconnect switch or a properly sized plug and receptacle within 6 feet of the freezer, is recommended.

Coldelite freezers are equipped with protection for the beater motor. Should the line voltage drop, or in the unlikely event a short circuit occurs, the overload protector will automatically disconnect the starter and the machine will stop immediately so that no permanent damage can be caused to the motor.

To restart the freezer, depress the RESET button which is accessible through an opening at the upper rear panel of the machine. The heater/protector must cool down for several minutes before the RESET will operate. (Ref. Fig. 4)

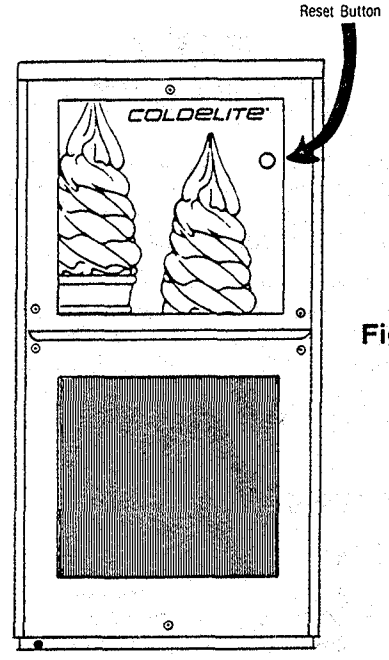


Figure 4

The compressor is also internally protected. If the Klixon protector trips due to an overload, again the protector must first cool down for several minutes before the compressor can be restarted.

Electrical Connections (Ref. Fig. 5)

Having removed the right side panel, the machine's wiring connection box can be found on the bottom of the frame and is labelled "Connect Power Line Here".

The power line is first passed through the access hole located at the bottom right rear of the machine. The line is then passed through the hole at the bottom deck directly below the wiring connection box. The power line may then be connected to the machine's power lines and wiring connection box. Upon completion, the power line should be fastened to the wiring connection box with appropriate electrical hardware, romex or cable connectors are recommended.

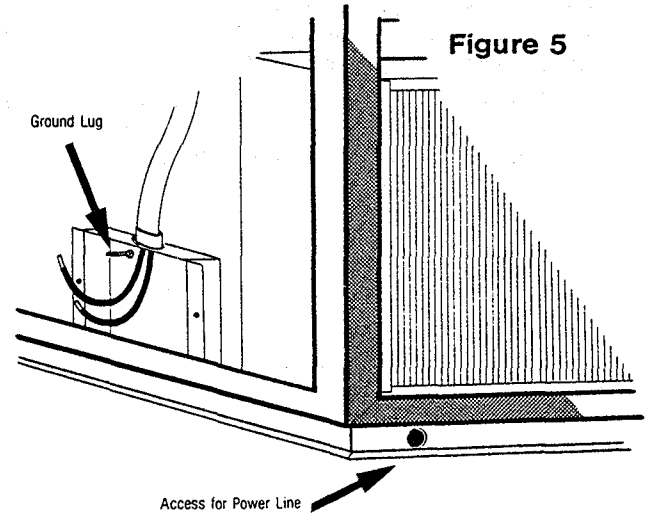


Figure 5

In all installations, the machine must be properly grounded. Since all high voltage components (controls are 24 volts) are connected by means of flexible conduit, adequate ground continuity is assured by running and fastening a ground line to the machine junction box ground lug. (Ref. Fig. 5)

After electrical connections are completed, check the rotation of the beater. It should be counter clockwise when facing the front of the machine. If checking from the rear of the machine, note direction of arrow on fly wheel for rotation.

E) Completing the Installation

Sanitary regulations may require that your counter model machine be sealed to the counter top. To seal, proceed as follows:

1) Clean the counter top thoroughly to remove any dirt, dust, etc.

2) Clean the lower rim, or bottom flange of machine base. (Ref. Fig. 6)

3) Apply bead (approx. 1/4" wide) of General Electric RTV-102 silicone sealant (or equivalent) to the bottom surface of the machine base.

4) Place the machine on counter in the location chosen.

5) Remove any excess sealant by slowly running a flat edged tool (spackling tool) aroung the base of mounting frame. This will create a seamless joint between the frame and the counter top. (Ref. Fig. 6)

6) Allow sealant to dry thoroughly (refer to sealant manufacturer's directions) before operating the machine.

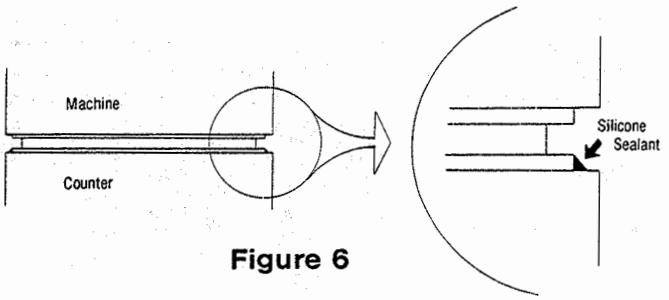


Figure 6

PART II
EXPLANATION OF CONTROLS

All operator controls are conveniently located at the front of the machine. (Ref. Fig. 7)

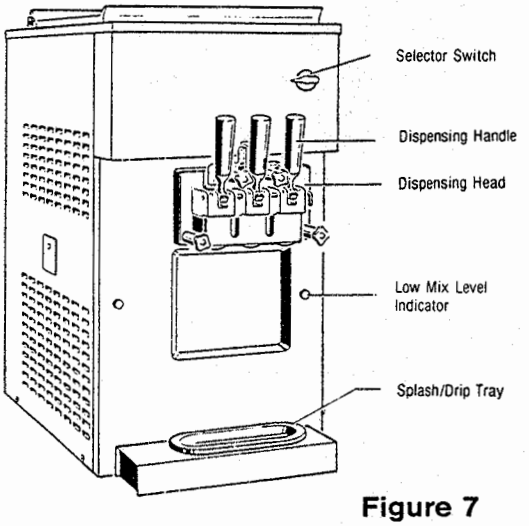
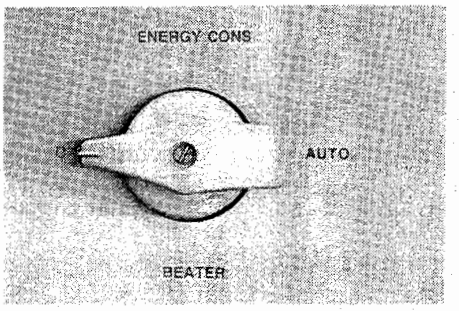


Figure 7

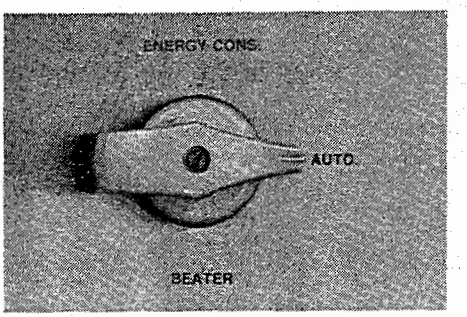
A) The Selector Switch

The Selector Switch is a four position, four function switch. The positions of the switch along with respective functions are as follows:

1) OFF - The machine does not operate in this position.

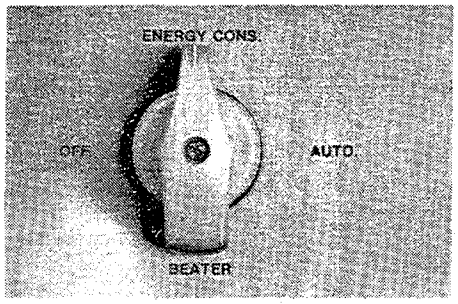


2) AUTO - This position is used for the continuous production and dispensing of frozen, finished product.

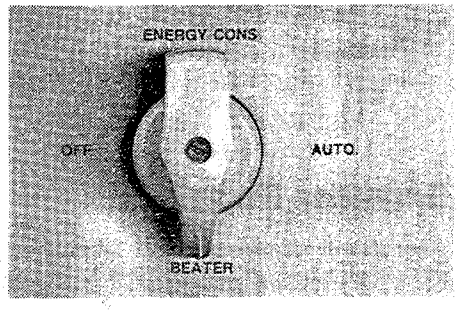


3) ENERGY CONS. - This position is used during prolonged, idle periods. The temperature of the product in both the mix tank(s) and freezer cylinder(s) is held at a safe temperature and controlled automatically by the thermostats. Product should never be served when in this position as the "storage" temperature is higher than normal serving temperatures.

The beater motor is not energized in this position which will allow significant ENERGY CONSERVATION.

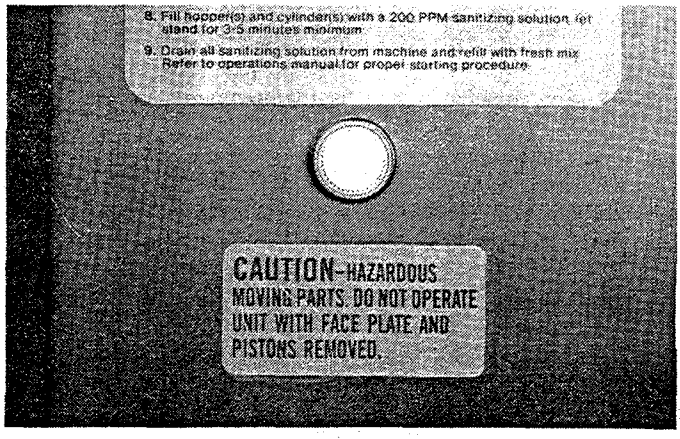


4) BEATER - This position is used only during start-up, cleaning and sanitizing procedures. While in this position, only the beater motor is activated. All refrigeration circuits are de-energized.

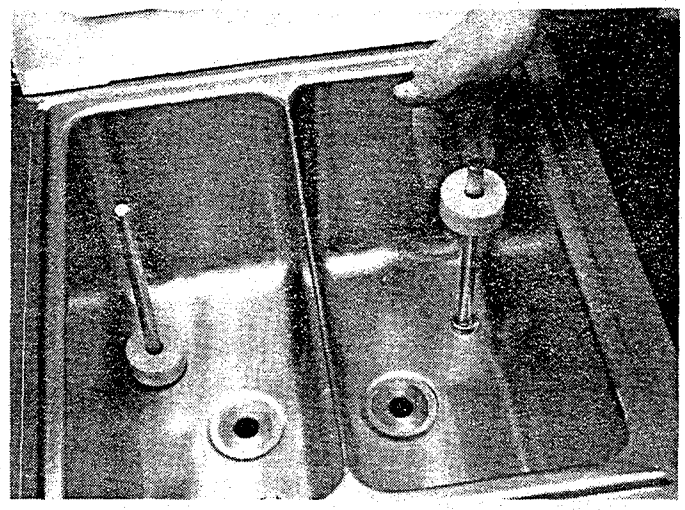


B) Low Mix Level Indicator

This light will illuminate when the level of mix in the mix tank falls below 1/2 gallon indicating the tank should be refilled. There are two indicators, one each for the left and right mix tank. When illuminated, dispensing of product should be stopped and the tank refilled with mix. Each tank has a total capacity of two gallons when full.


8. Fill hopper(s) and cylinder(s) with a 200 PPM sanitizing solution, let stand for 3-5 minutes minimum.
9. Drain all sanitizing solution from machine and refill with fresh mix. Refer to operations manual for proper starting procedure.
CAUTION-HAZARDOUS MOVING PARTS. DO NOT OPERATE UNIT WITH FACE PLATE AND PISTONS REMOVED.

1) The MIX LEVEL SWITCH is located within the stainless steel rod attached to the bottom of each mix tank. A plastic, "DONUT" shaped float is placed over the rod and will float with the level of mix. The plastic float contains a magnet which will energize or close the mix level switch at a factory pre-set position. Once closed, the mix level switch energizes the "low mix level indicator".

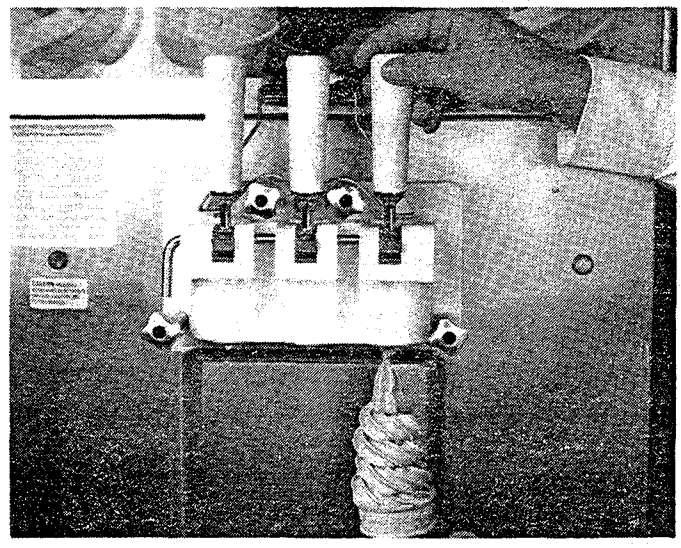


C) The Dispense Handle(s)

The Dispense Handle controls the flow, or extraction rate of finished, soft serve product.

Pulling the handle in a downward direction will open the dispense orifice. When the unit is in the "AUTO" mode, this will allow finished product to be extracted and served.

The downward motion of the handle raises the dispense piston, opening the dispense orifice. The rising motion of the piston, raises the front micro switch activating lever located directly above the piston. At a factory pre-set position, the front micro switch activating lever will activate the front micro switch which, when in the "AUTO" mode, energizes the beater motor.



D) Electric Control Panel

The Electric Control Panel located behind the upper rear panel of the unit, contains the controlling circuit to the components of the machine. This panel is to be accessed only by trained, experienced technicians.

Warning ⚠

Disconnect freezer from the source of electrical supply before attempting to service.

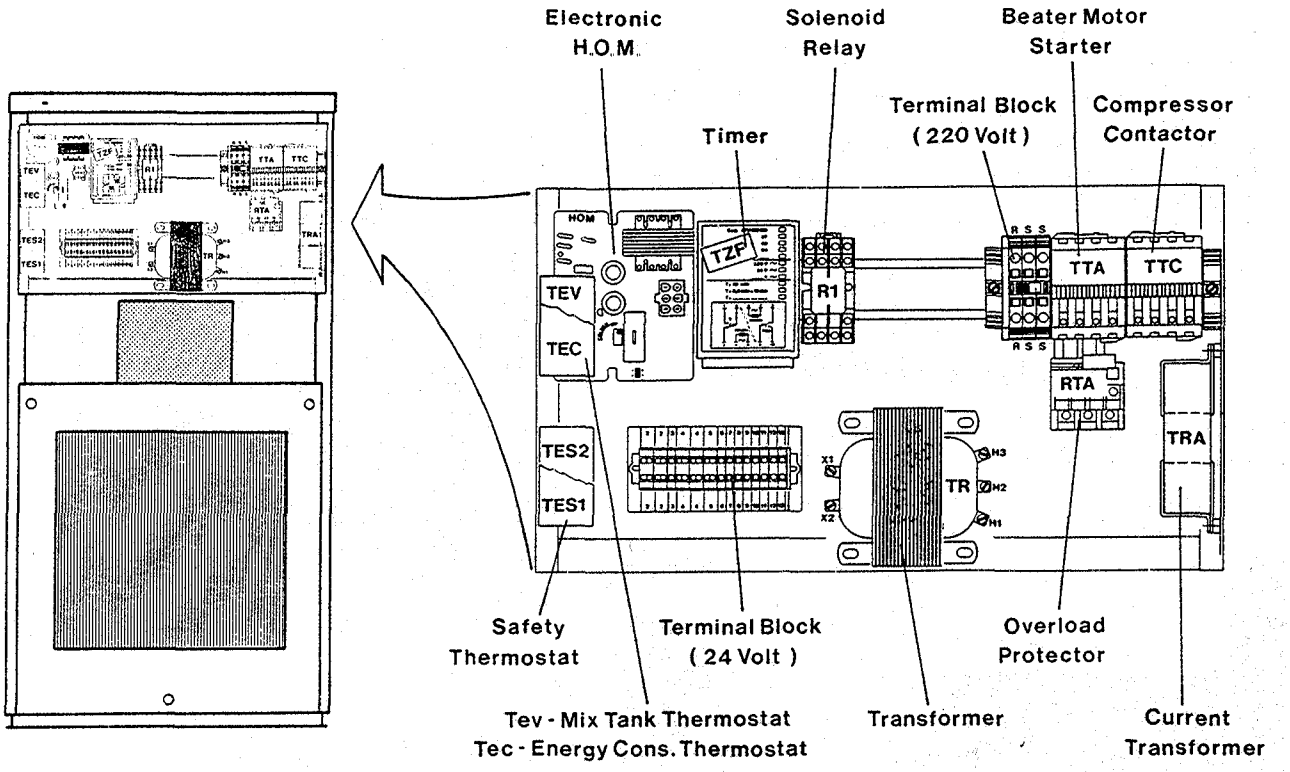


Figure 8

The following is an explanation of the control panel controls;

1) COMPRESSOR CONTACTOR - activates the refrigeration compressor. When the unit is in the "AUTO" mode, the compressor contactor can be energized by the electronic H.O.M., timer, or "TEV" thermostat. In the "ENERGY CONS." mode, the contactor will be energized by the "TEC" thermostat.

2) BEATER MOTOR STARTER - activates the beater/auger drive motor. In the "BEATER" mode, the starter is energized by the selector switch. In the "AUTO" mode, the starter is activated by either the front micro switch or timer.

3) The TERMINAL BLOCK (220 volt) is the inter-connection point for high voltage components, i.e. compressor, transformer, beater motor, and fan motor (when applicable).

4) The SOLENOID RELAY directly controls the mix tank and freezer cylinder refrigeration solenoid valves. In the "AUTO" mode, the relay can be energized by the timer, front micro switch, or by the "TEV" thermostat. When in the "ENERGY CONS." mode, the relay is activated by the thermostats.

5) TIMER - is dual purpose,serving as a 10 minute timer and 2 second time delay. In the "auto" mode, the 10 minute timer activates the beater motor at 10 minute intervals which allows the ELECTRONIC H.O.M. to "check" consistency of the product in the freezer cylinder(s). In the event additional refrigeration is needed to maintain consistency, the 2 second time delay serves to prevent simultaneous energizing of the beater motor and compressor.

6) The ELECTRONIC HARD-O-MATIC (H.O.M.) automatically senses and controls product consistency when the unit is in the "AUTO" mode. Depending on signals received from the beater drive system, the H.O.M. activates or stops the refrigeration system to maintain pre-set product consistency.

7) The CURRENT TRANSFORMER monitors beater motor current for the electronic H.O.M.

8) The OVERLOAD PROTECTOR senses the current supplied to the beater motor and will stop the entire machine in the event of an overload. This device also houses the overload reset mechanism.

9) The main TRANSFORMER steps down the line voltage (220 volts) to 24 volts for the control circuit.

10) The 24 volt TERMINAL BLOCK serves as the inter-connection point for all 24 volt controlling circuit components.

11) The "TEV" THERMOSTAT monitors mix tank temperatures. When in the "AUTO" or "ENERGY CONS." modes, temperature of the mix in the mix tank should never exceed 45°F. Optimum storage termperature is 40°F.

12) The "TEC" THERMOSTAT monitors freezer cylinder temperatures when in the "ENERGY CONS." mode. For optimum results, the product in the freezer cylinder should be stored at a 28-34°F temperature.

13) The "TES 1 and TES 2" thermostats monitors freezer cylinder temperatures when in the "AUTO" mode. If for some reason the temperature in the cylinder drop below the range of the ice cream temperature the compressor is disconnected.

NOTE: Several hours in the "ENERGY CONS." mode must be allotted prior to checking temperature.

E) Other Controls

1) Refrigeration SOLENOID VALVES are located behind the left side panel. These valves are normally closed and when energized by the solenoid relay, direct refrigerant flow to either the freezing cylinder or mix tank. The mix tank solenoid is identified as "EVV" and the cylinder solenoid as "EVC". (Ref. Fig. 9)

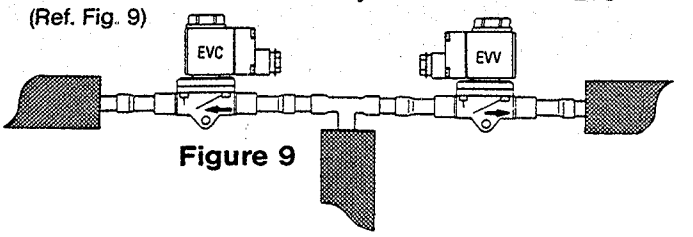


Figure 9

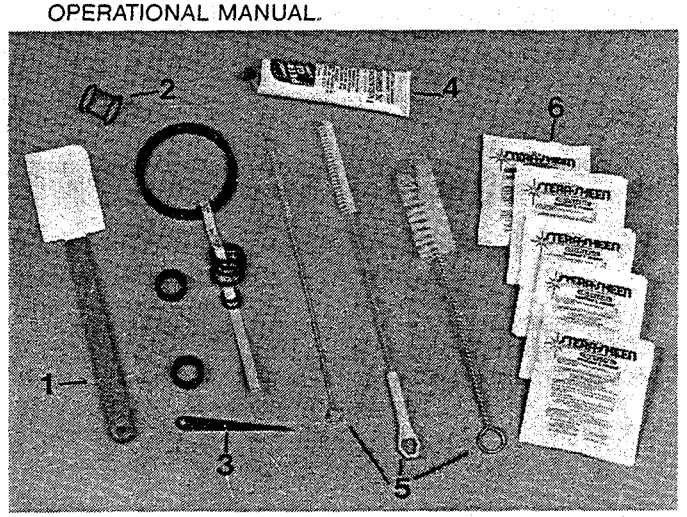
2) The HIGH PRESSURE CUT-OUT is located on the right side of the freezer and is tied into discharge or high side line near the compressor. In the event of high pressure situation, it will shut down the compressor. Reset is automatic when the high pressure subsides. Common causes for cut-out or shut down are restricted air flow on air cooled models, unusually high ambient (room) temperatures, and restricted or excessively hot water flow on water cooled models.

PART III
INITIAL CLEANING PROCEDURE

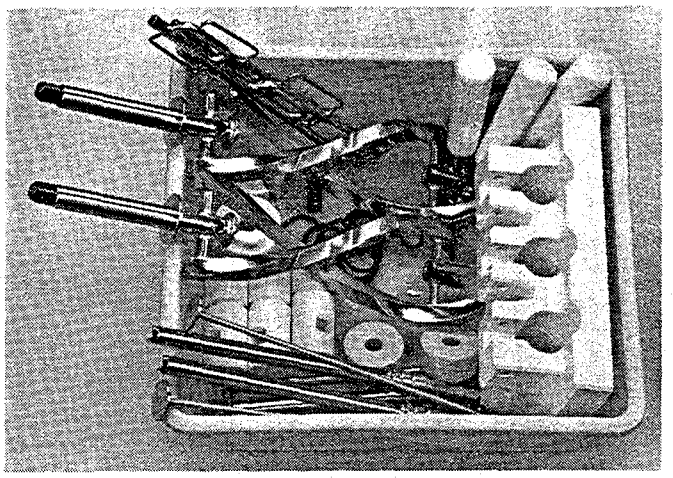
This is a new machine and it must be completely disassembled, washed, and sanitized before starting. Proceed, as follows:

1) Remove the mix tank cover and items packed in the tank (spare parts, sanitizer, lubricant).

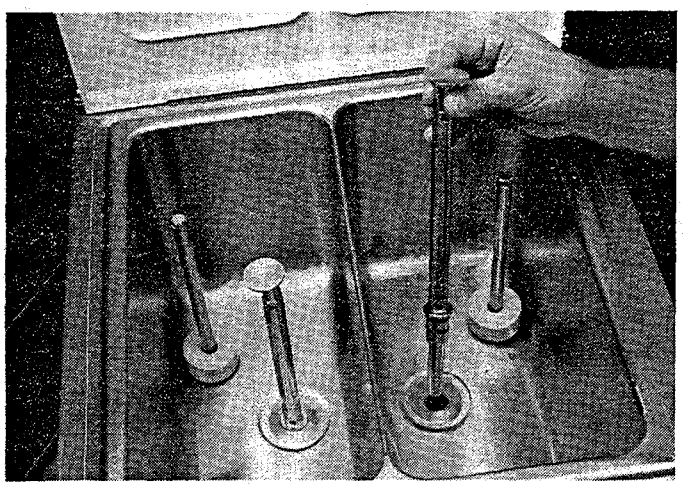
The spare parts or start-up kit will include: 1) a spatula, 2) spare o-rings and rubber seals, 3) an o-ring extractor, 4) a tube of sanitary lubricant, 5) three various sized cleaning brushes, 6) several packets of sanitizer and the OPERATIONAL MANUAL.



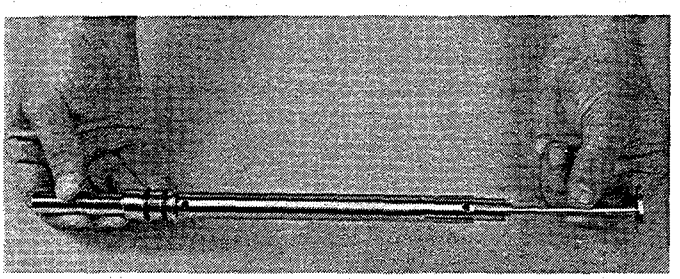
HELPFUL SUGGESTION: Before proceeding with the disassembly of the freezer, we recommend a plastic dish pan be used in which to place the parts. This will minimize the possibility of misplacing or damaging the various component parts.



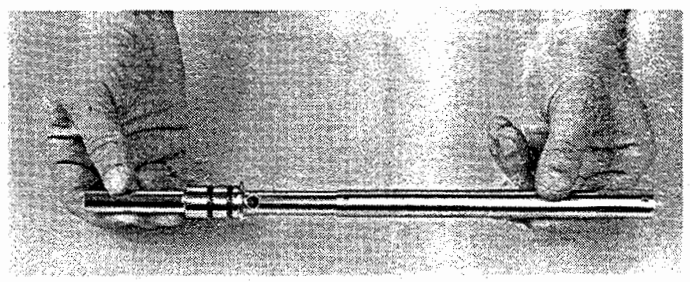
2) Proceed with the disassembly process by removing the two gravity feed tubes located in the mix tank. Snug fitting, the tubes can be removed by pulling straight up and out.



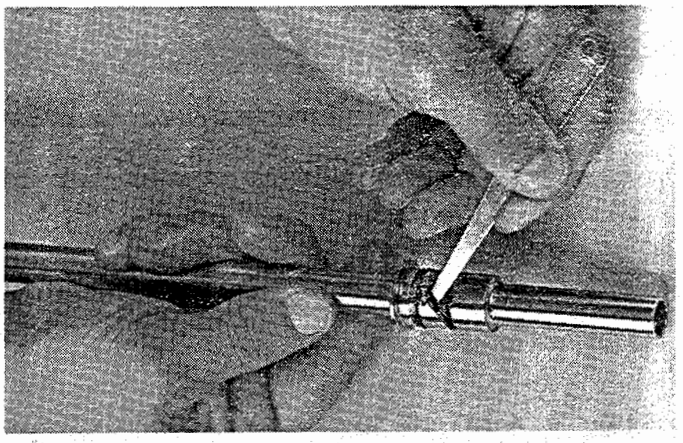
Once removed, the tubes must be disassembled. To disassemble, first remove the "SPLASH GUARD" by pulling it out of the tube.



Next, remove the gravity tube "SLEEVE" by pulling it straight off of the tube.



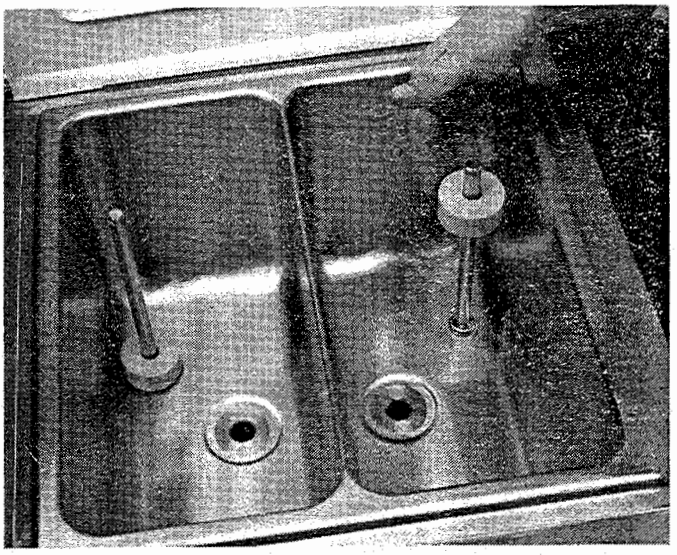
Finally, remove the o-rings using the O-RING EXTRACTOR included in the "start-up kit".



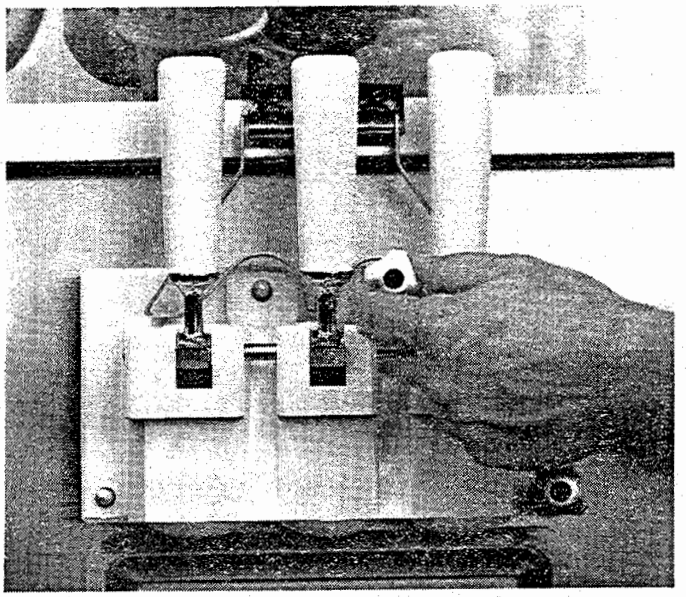
Warning

Never use anything other than the O-RING EXTRACTOR to remove o-rings as damage to the o-ring and/or part can result.

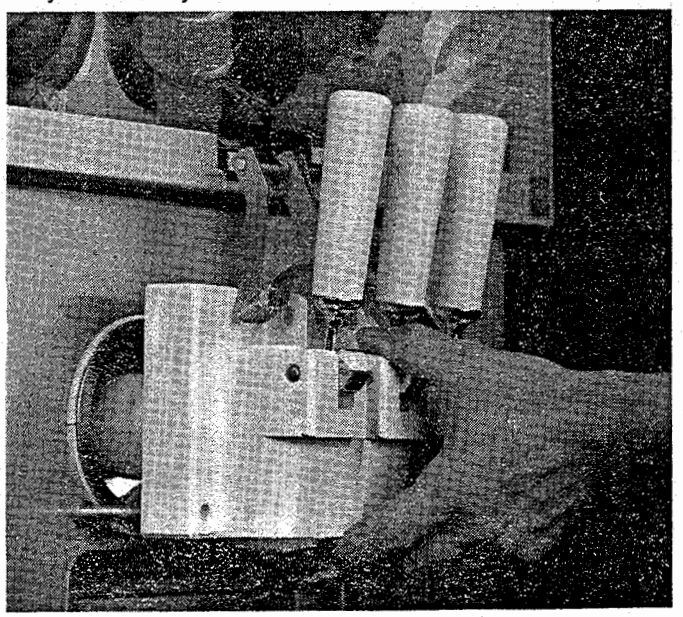
3) Remove the two mix level "floats" by lifting them off the stainless steel shaft.



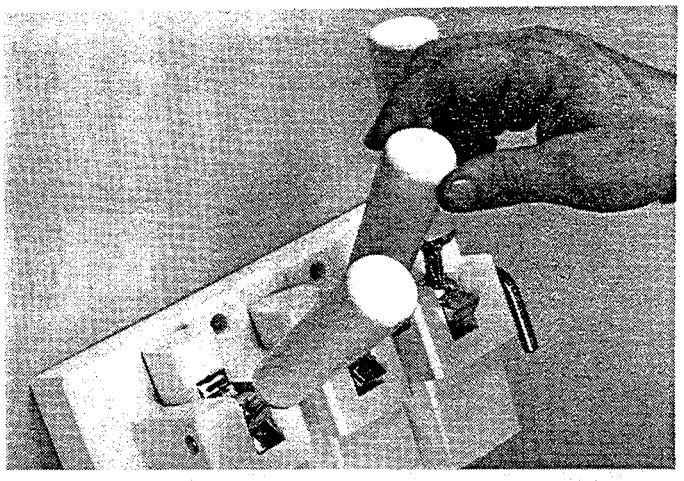
4) Loosen and remove the four (4) dispensing head retaining knobs. The knobs are removed by turning in a counter-clockwise direction.



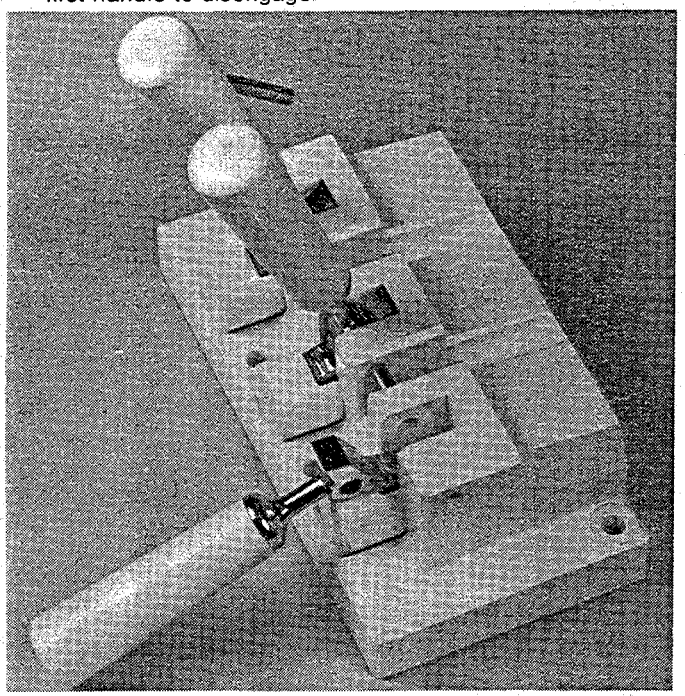
5) Remove the dispensing head by pulling it straight towards you and away from the machine.



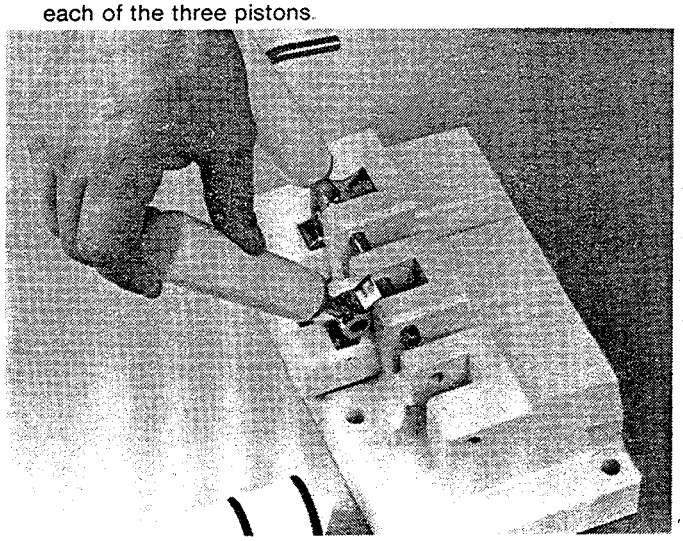
6) Disassemble the dispensing head by first opening all the dispense handles.



Pull the handle retaining rod out far enough to allow the first handle to disengage.

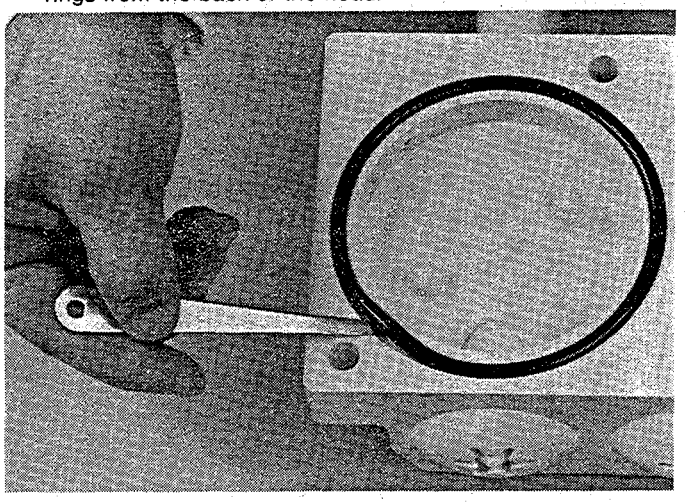


Return the retaining rod to its original position. Using the rod as a fulcrum, lever the dispense piston out of the dispense head with the handle. Repeat this process for each of the three pistons.

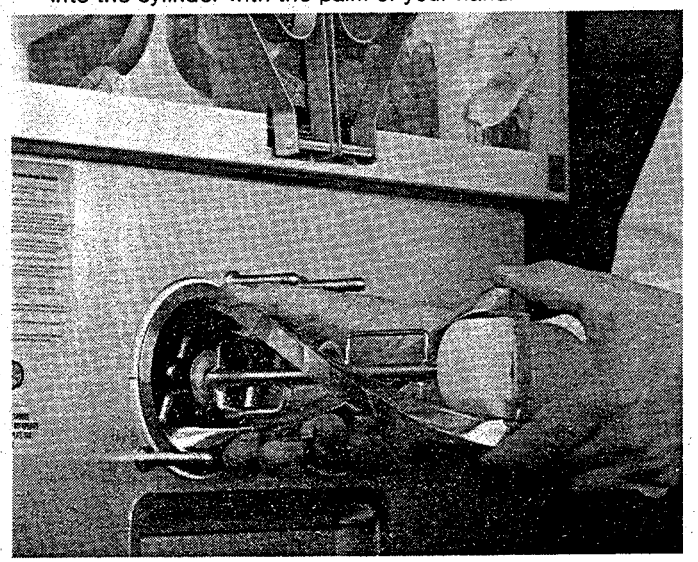


Using the O-RING EXTRACTOR, remove the piston o-rings. Each piston o-ring groove is notched for easy insertion of the o-ring extractor.

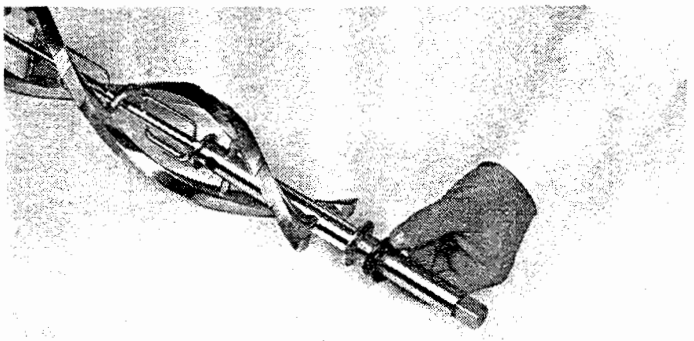
Turn the dispensing head over and remove the two large o-rings from the back of the head.



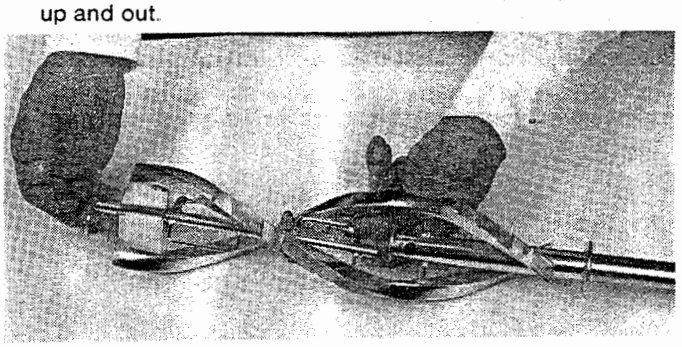
7) Remove the beater/augers from the freezer cylinders. Pull the beaters STRAIGHT out towards you. Should they become jammed, DO NOT FORCE. Tap the front of the beater back into the cylinder with the palm of your hand.



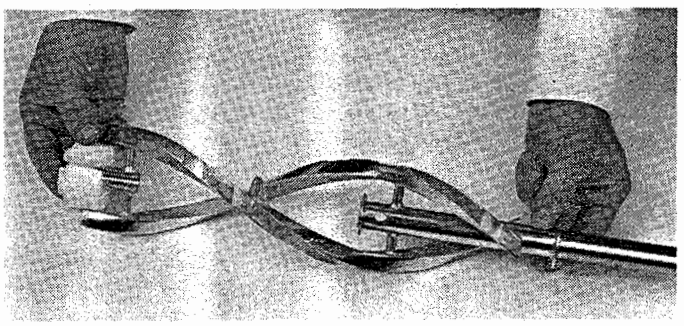
8) Disassemble the beater/auger by first removing the rubber beater shaft (lip) seal, simply slide it off the shaft.



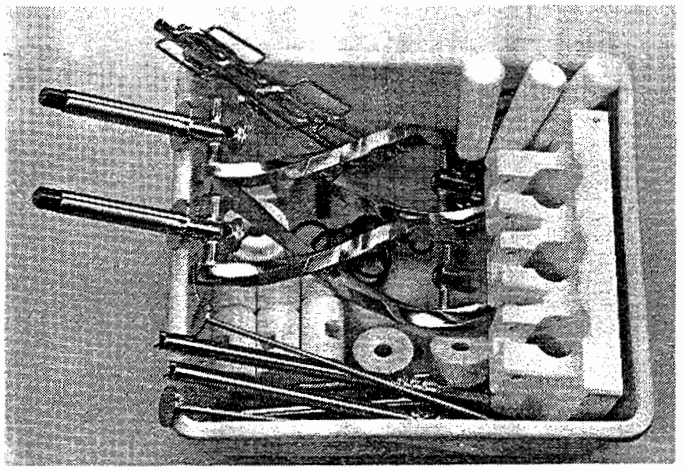
Continue disassembly by removing the beater IDLER. Pull forward until the grooved portion of the shaft lines up with the opening at the front of the beater/auger. Lift the idler up and out.



Finally, remove the beater/auger END PUSHER by pulling straight and away from the beater.



9) The machine is now completely disassembled. The parts should now be washed, rinsed and sanitized.



10) Wash all the parts in luke warm water (80° - 85°F) using a mild detergent and the cleaning brushes provided in the START-UP KIT.

DO NOT USE HOT WATER ON ANY OF THE PLASTIC PARTS AS DAMAGE TO THE PARTS CAN RESULT.

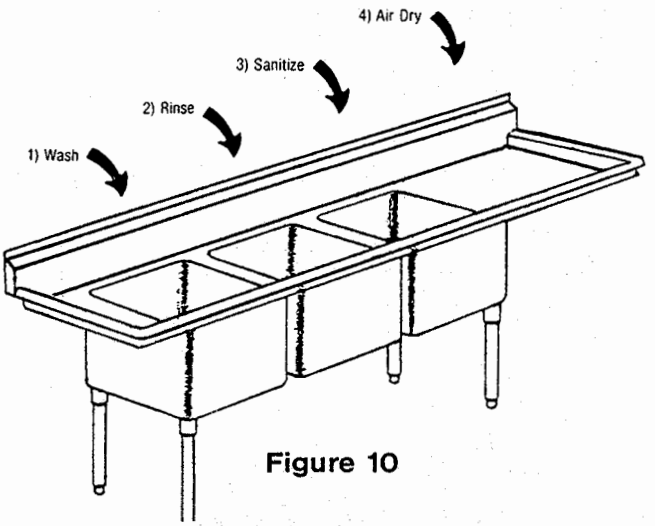
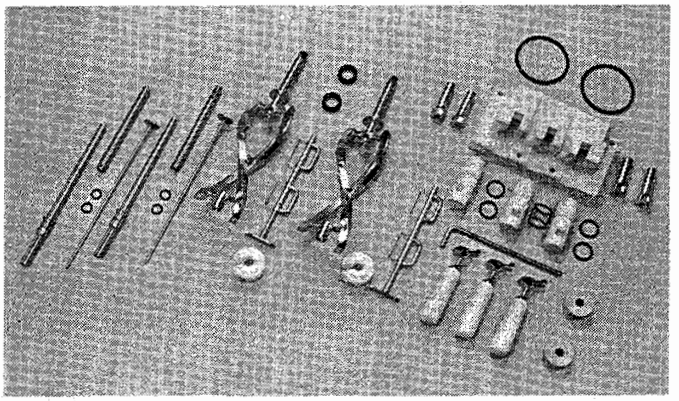


Figure 10

Rinse the parts in luke warm water (80° - 85°F).

Place the parts in luke warm, sanitized water for 2 to 5 minutes. Use the sanitizer provided in the START-UP KIT following the manufacturers directions.

11) Place the parts on a clean, sanitized counter area and allow to air dry or assemble wet. DO NOT TOWEL DRY OR RINSE SANITIZED PARTS.

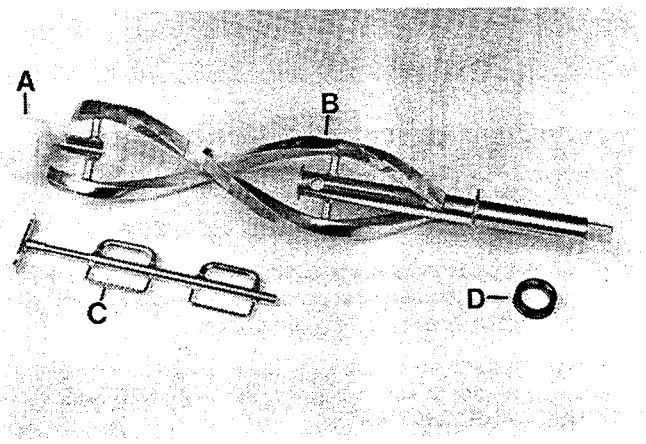


PART IV
ASSEMBLING THE FREEZER

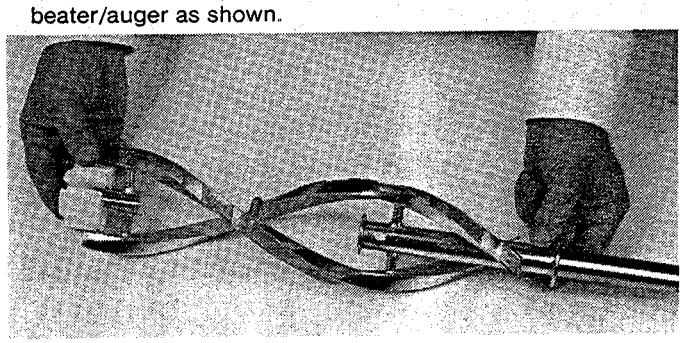
Once the parts have been washed, rinsed and sanitized, the freezer is ready to be re-assembled. Prior to beginning the re-assembly procedure, sanitize your hands by submerging in the sanitizing solution. Begin to re-assemble as follows:

A) Assembling the Beater/Augers

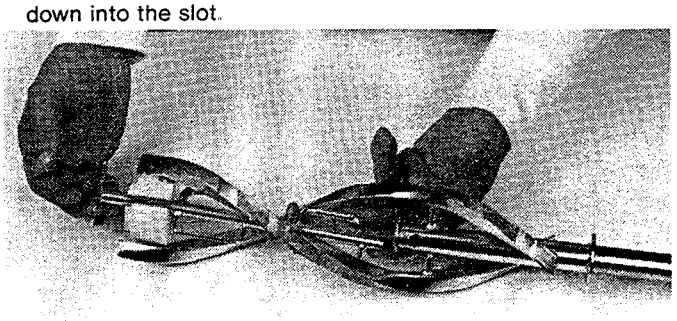
1) First, re-assemble the beater/auger assembly. Begin by gathering the four parts needed to complete each assembly: A) plastic "END PUSHER", B) BEATER/AUGER, C) IDLER, D) rubber, beater LIP SEAL.



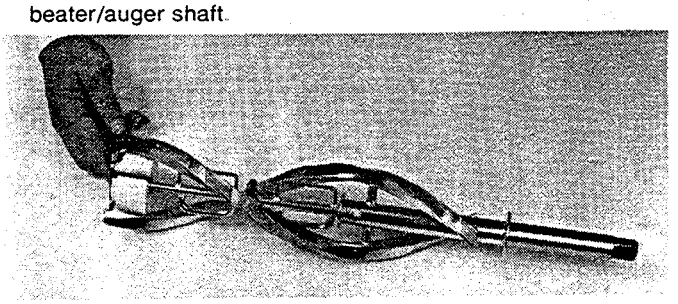
2) Aligning the end-pusher slot with the slotted shaft located at the front of the beater/auger, slide the end pusher onto the beater/auger as shown.



3) Next, install the idler. Holding the idler in a horizontal position, turn the idler until the fins are in an upright position. Then insert the idler by aligning the thinner portion of the idler shaft with slot in the end-pusher. Guide the idler shaft down into the slot.

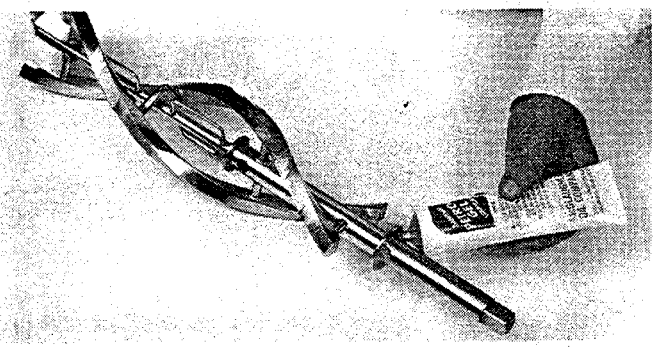


Push the idler back, inserting its shaft into the hole of the beater/auger shaft.

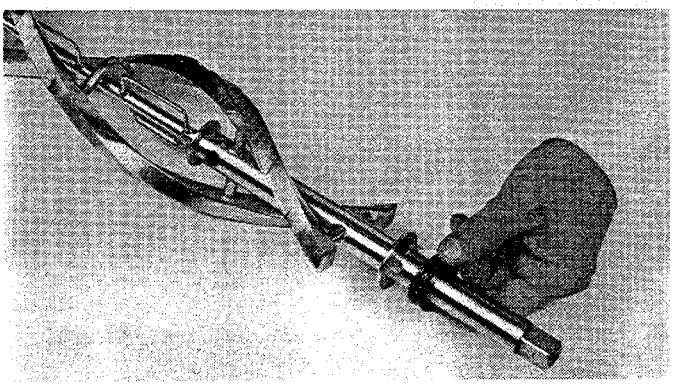


When installed correctly, the idler (when turned) should rotate freely. If the idler does not rotate, it is incorrectly installed and must not be installed into the machine. Repeat the above instructions.

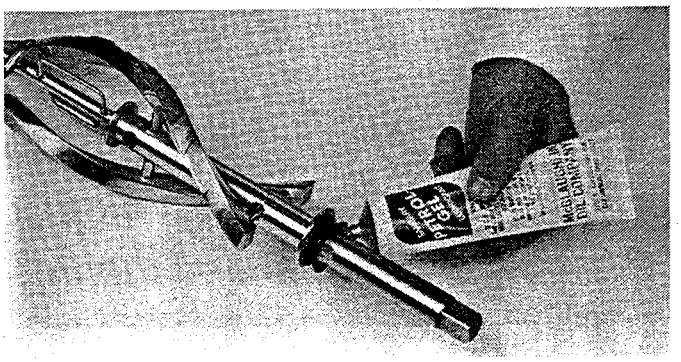
4) Next, lubricate and install the beater lip seal by first lubricating the beater/auger shaft with the lubricant included in the START-UP KIT. Place three, 1/4" beads in equal distances around the shaft as shown below.



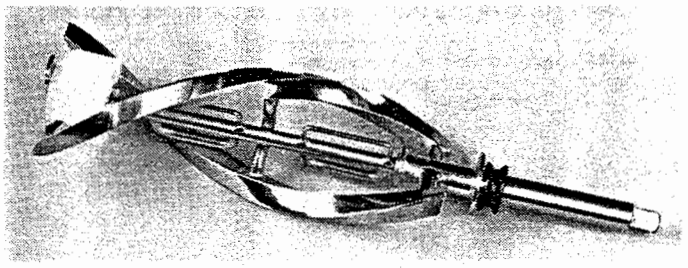
Slide the rubber, beater lip seal onto the shaft.



Lubricate the end of the beater lip seal which is not lubricated by placing three, 1/4" beads in equal distances around the seal surface as shown below.

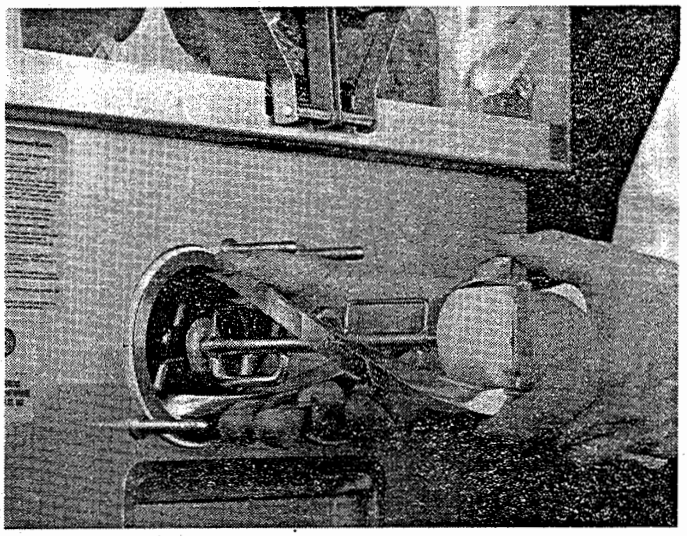


5) Repeat the above procedure for the second beater/auger assembly.

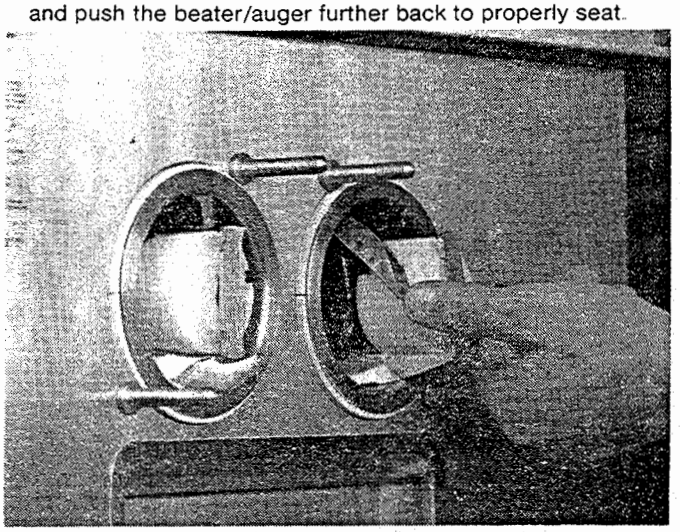


6) Finally, insert the beater/auger into the freezer cylinder. Holding the beater/auger horizontally, slide it straight into the cylinder until it can go no further.

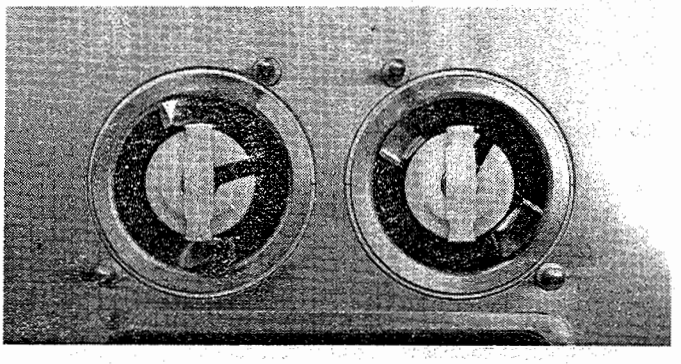
IMPORTANT: Before installing the beater/auger, make certain the beater lip seal is in place and the idler is properly installed.



Rotate the beater/auger until you feel the drive shaft engage and push the beater/auger further back to properly seat.

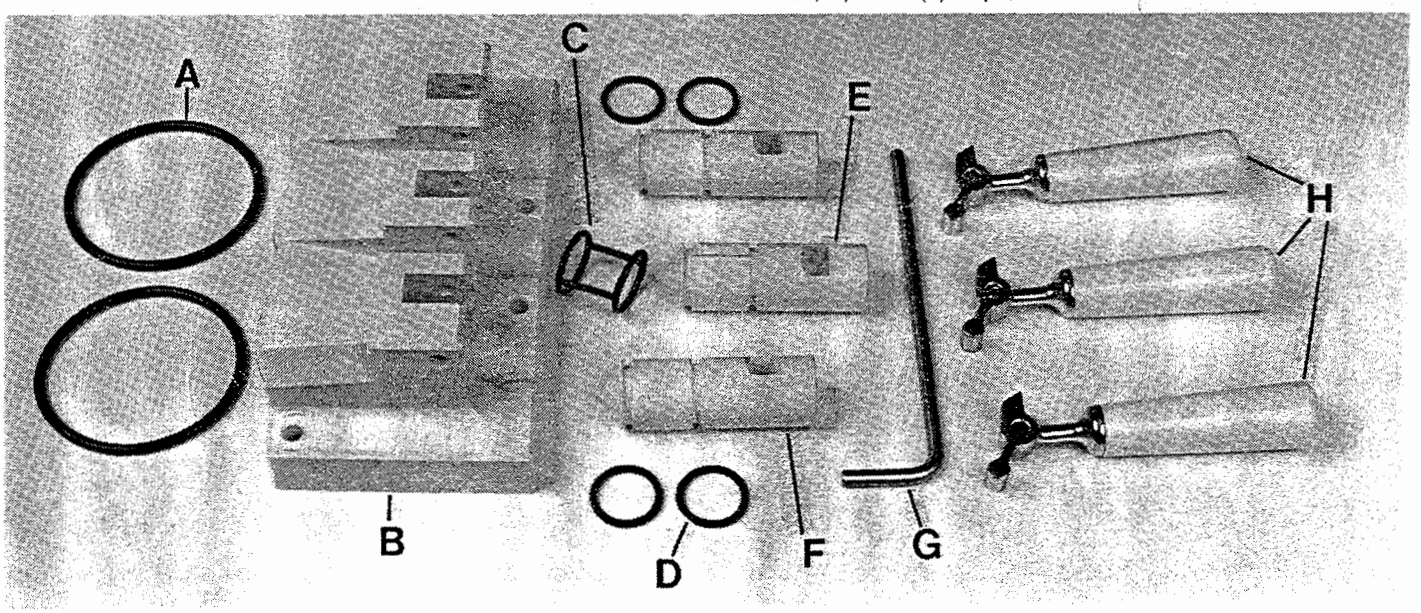


7) Insert the second beater/auger. Once installed, make certain the flat portion of the idler is in a vertical position. The idlers should spin freely and are counter weighted to naturally rest in a vertical position.

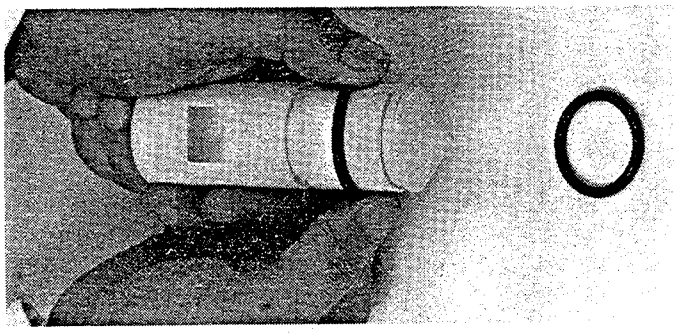


B) Assembling the Dispensing Head

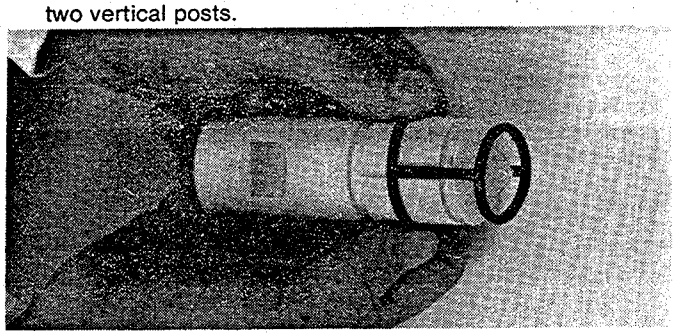
1) Begin by gathering all the parts necessary to assemble the dispensing head. These parts include: A) two (2), 4" diameter O-rings, B) the dispending head body, C) the center piston O-ring, D) four (4), 1⅜" diameter end piston O-rings, E) center piston, F) two (2) end pistons, G) handle retaining rod, H) three (3) dispense handles.



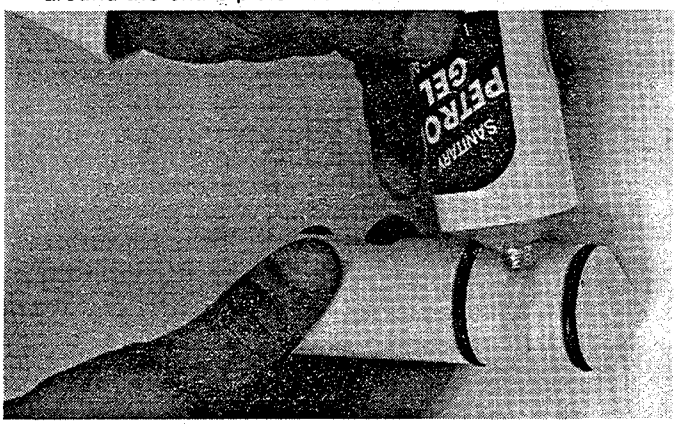
2) First, remount the end piston O-rings onto the end pistons. Simply roll onto the piston until they drop into the O-ring notches.



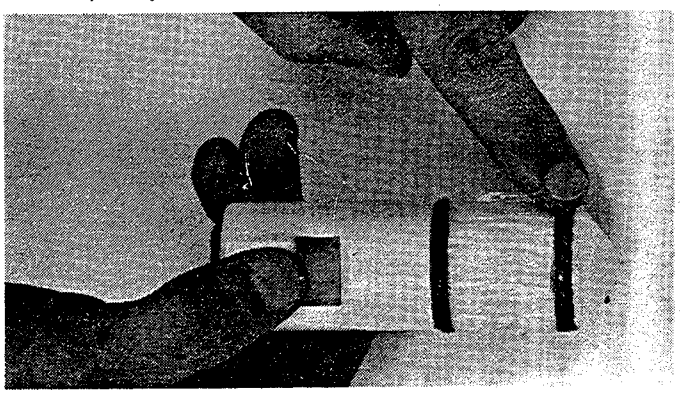
3) Remount the center piston O-ring onto the center piston. This O-ring and piston are easily identified as they appear to be two O-rings and O-ring grooves interconnected by two vertical posts.



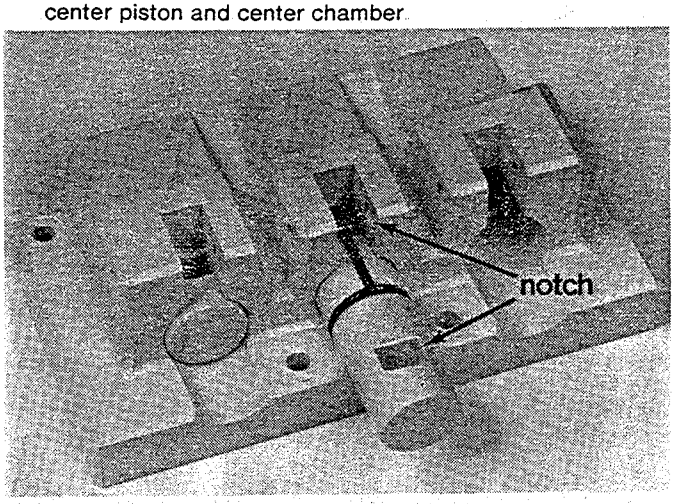
4) Once the O-rings have been mounted, liberally lubricate the area between the two O-rings. Place a bead of lubricant around the entire piston as shown.



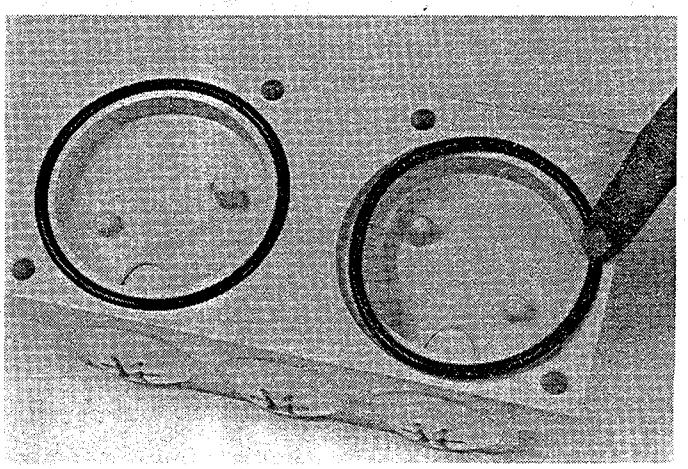
Spread the lubricant on the surface area between the two O-rings and the O-rings as well. This will ensure free movement of the dispense handles once the head is completely assembled.



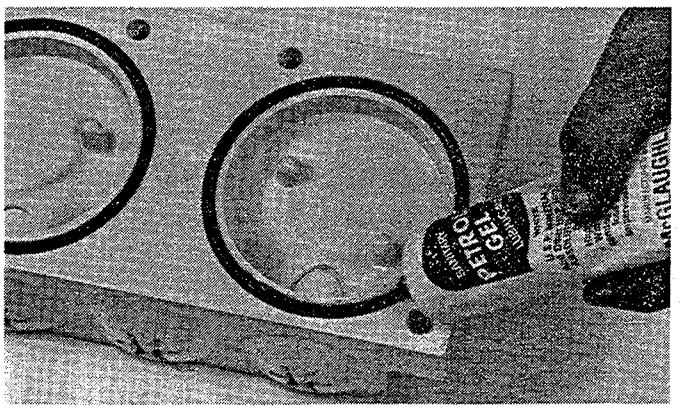
5) Insert the two end pistons into the two end chambers of the dispensing head body making certain to align the square notch of the piston with the rectangular notch at the front of the dispense head. Repeat this process with center piston and center chamber.



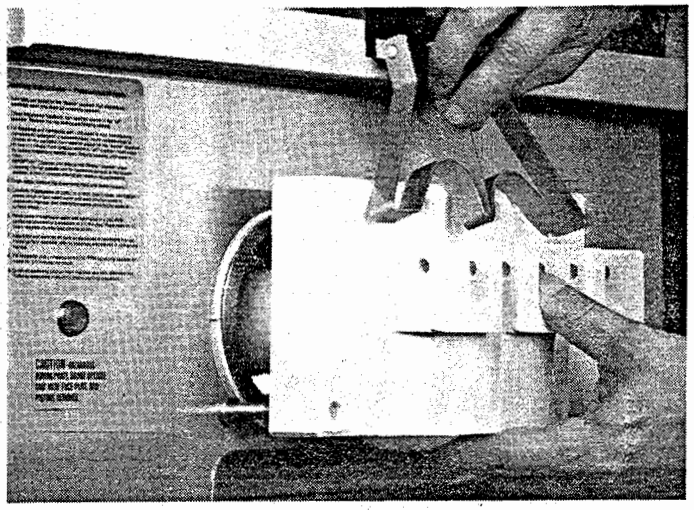
6) Turn the dispense head over and install the two 4" diameter O-rings into O-ring grooves located in the back of the head.



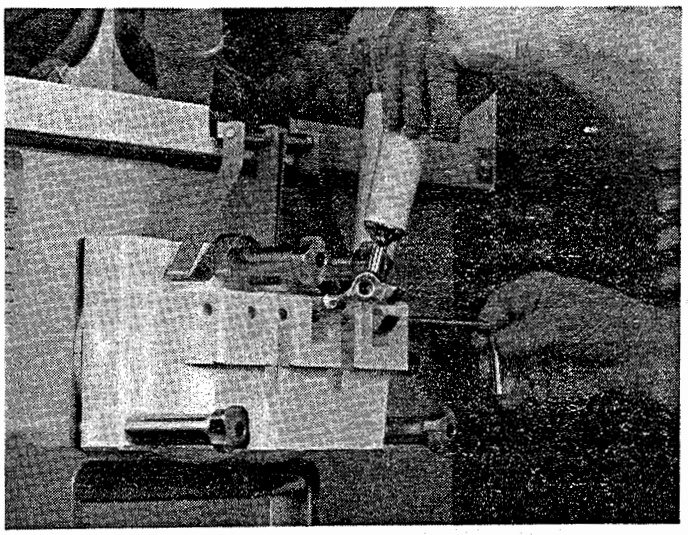
Lightly lubricate the O-rings with the sanitary lubricant.



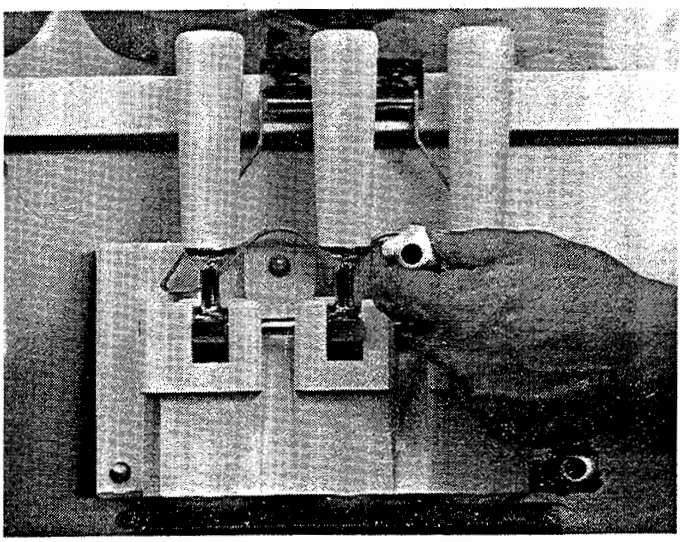
7) Affix the dispensing head to the machine. Lift the front micro switch activating lever and slide the dispensing head onto the four mounting studs. Release the activating lever, the lever should rest vertically atop the pistons.



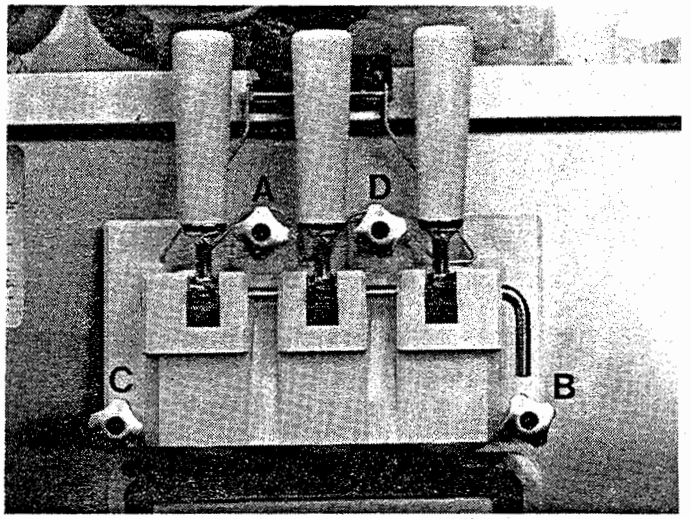
8) Install the dispensing handles. Insert the round lobe of the handle cam into the square notch of the piston. Slide the retaining rod through the dispense head and cam hole to secure.



9) Fasten the dispense head to the machine using the four (4) stainless steel retaining knobs.

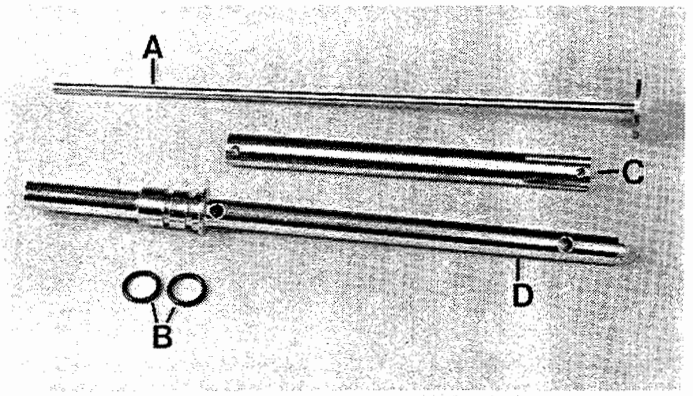


10) HAND TIGHTEN the knobs in a criss-cross manner as shown below.

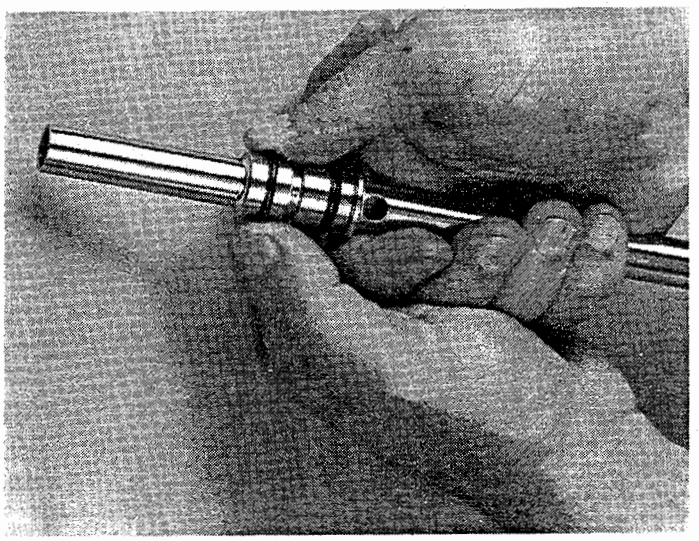


C) Assembling the Gravity Feed Tubes

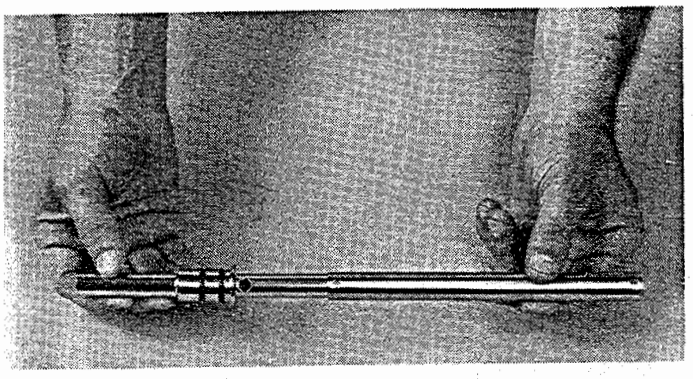
1) Begin by gathering the parts needed to assemble the gravity feed tubes. These parts include: A) the SPLASH GUARD, B) two (2) 3/4" diameter O-rings, C) the TUBE SLEEVE, and D) the GRAVITY FEED TUBE.



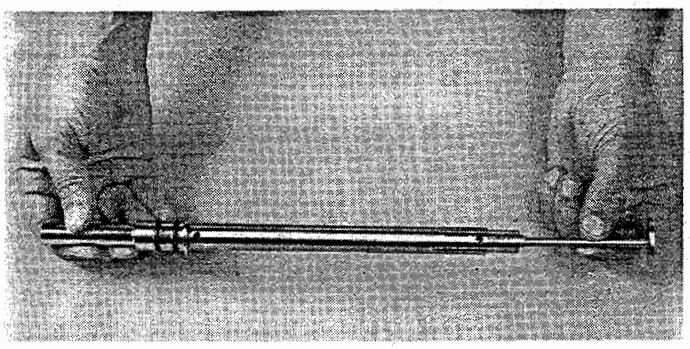
2) Slide the two (2) 3/4" O-rings onto the bottom of the gravity feed tube until they drop in the O-rings grooves.



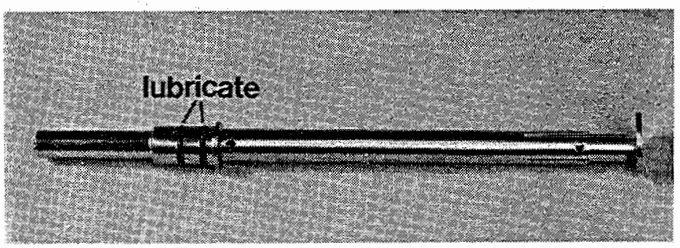
3) Slide the sleeve onto the tube. Please note that the slots in the sleeve should be at the top of the tube when installed.



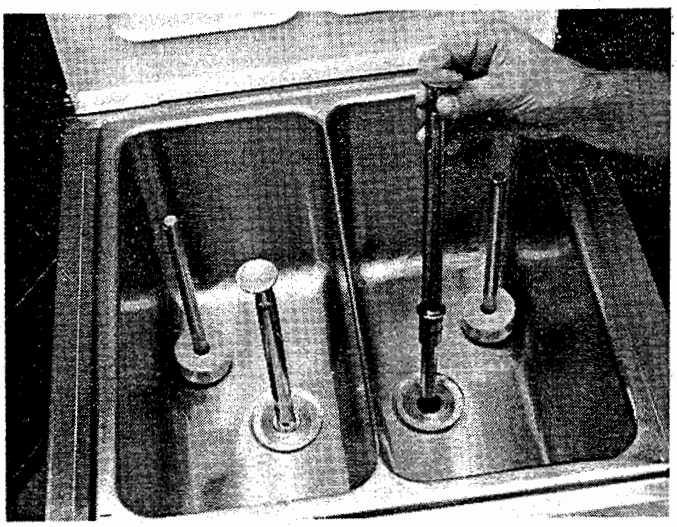
4) Slide the splash guard into the tube.



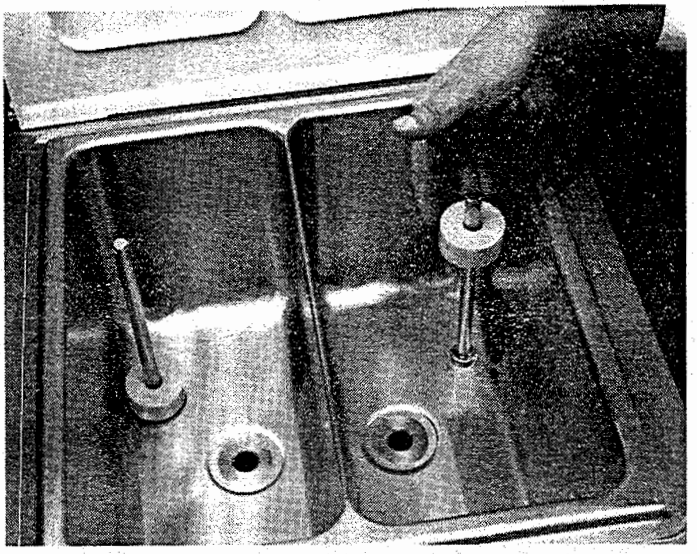
5) Lubricate the two O-rings with sanitary lubricant.



6) Insert the assembled tubes into the hole at the bottom of the mix tank. Press the tube down until it seats and the flange at the base of the tube rests against the bottom of the mix tank.



7) Install the two (2) mix level floats by simply sliding one each onto the stainless steel shaft in the mix tank.



The machine is now completely assembled and ready to be sanitized.

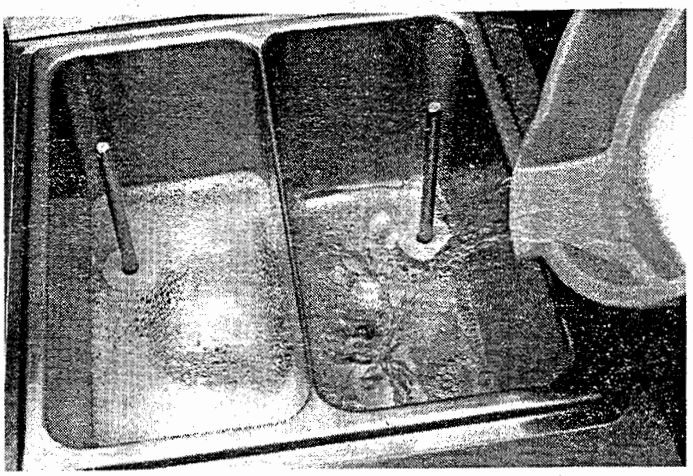
PART V
SANITIZING THE FREEZER

Prior to starting the machine with your soft serve product, the machine must be sanitized. The frequency of cleaning and sanitizing cycles must comply with local health regulations. If uncertain about local regulations, contact your local Board of Health.

Sanitizing the machine is most important. This procedure will retard the growth of bacteria and insure excellent test results on your product when examined by local Health and/or Agriculture Departments.

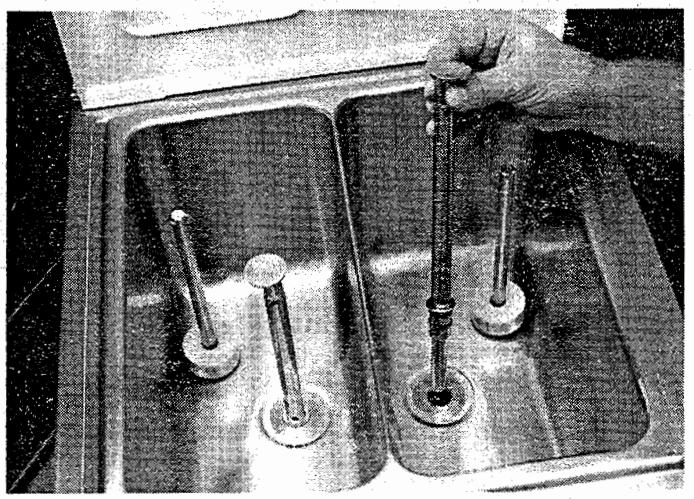
To begin, you will need a clean pail, sanitizer (sample packets included in the start-up kit), spatula (included in start-up kit), and brush (plastic bristle).

1) Mix the sanitizer (2 ounces of Steera Sheen green label or equivalent) into a clean pail containing two gallons of warm water. This solution will make a 200 P.P.M. (parts per million) concentration of chlorine sanitizing solution. Pour the solution into the mix tanks.

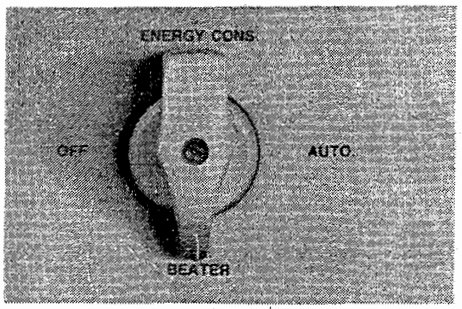


IMPORTANT: Do not exceed the formula recommended by the sanitizer manufacturer as it will not add to its effectiveness.

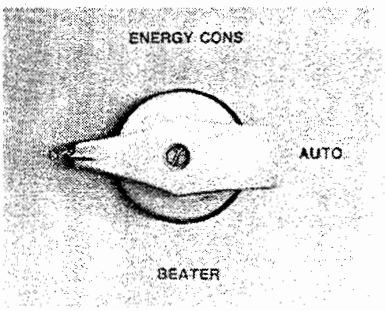
2) Pull the gravity feed tubes out of the mix tank holes and lay them down in the tank. This will allow the cylinders to completely fill with the sanitizing solution.



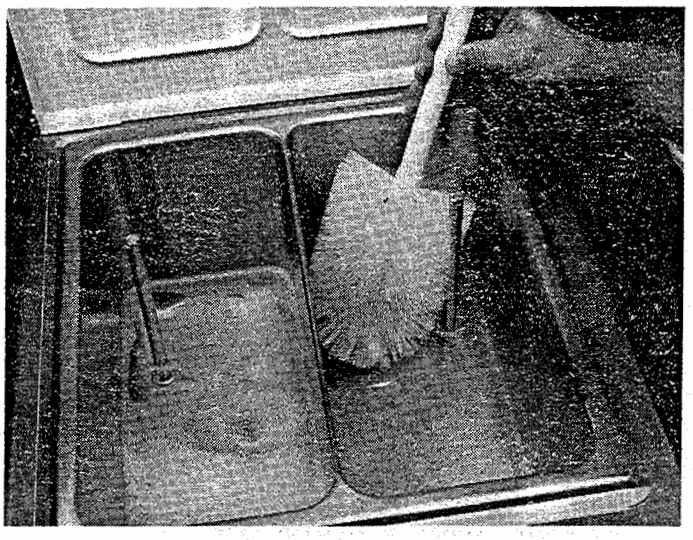
3) Turn the selector switch to the "BEATER" position for 30 seconds.



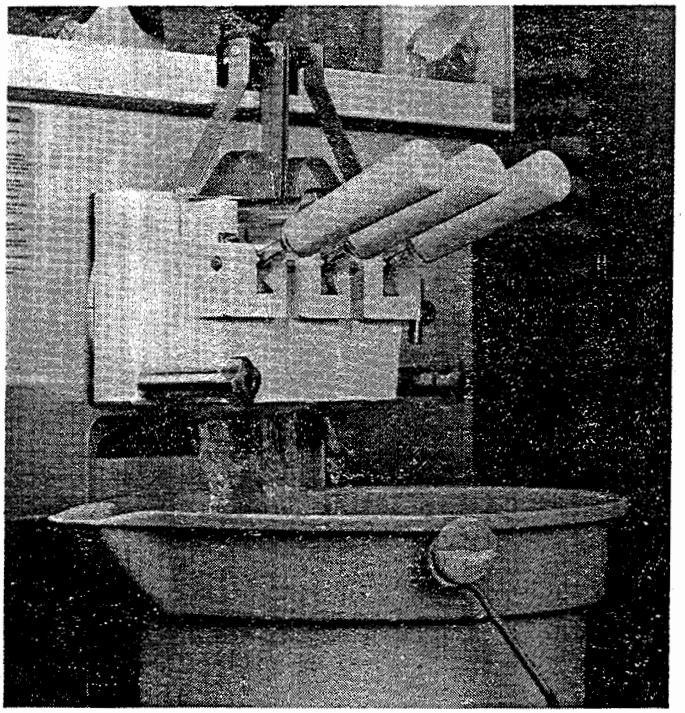
4) Turn the selector switch to the "OFF" position.



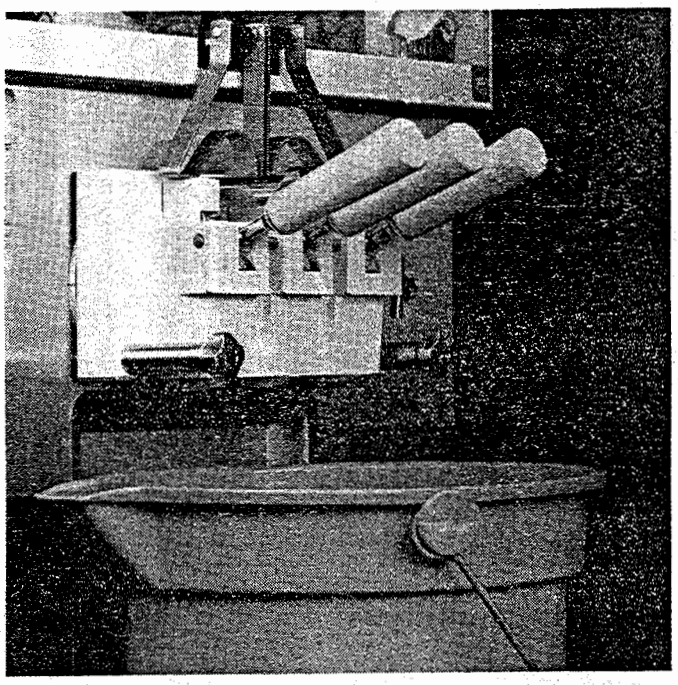
5) Using a sanitized soft bristle brush, brush the sides of the mix tank, and all other product contact areas. Allow the sanitizing solution to remain in contact with all product contact areas for three to five minutes.



6) Place the clean, sanitized pail under the dispensing head and open the handles by pulling them in a downward direction.



7) Allow the sanitizer to completely drain. Close handles.



HELPFUL SUGGESTION: When the sanitizer stops flowing, leave the handles open and turn the selector switch to the "BEATER" position for two to three seconds to help remove the last of the sanitizer.

CAUTION: We recommend the beater/auger be turned as little as possible during the washing and sanitizing operations. Excessive use will cause premature wear to the beater/auger and cylinders.

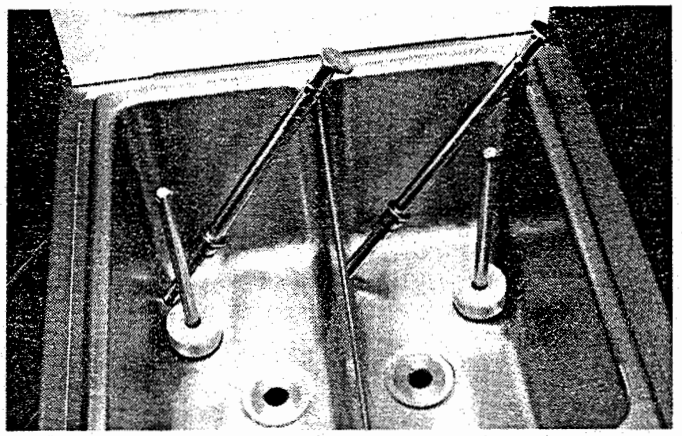
PART VI
STARTING THE FREEZER

Only after the machine has been thoroughly cleaned and sanitized is the unit ready for production.

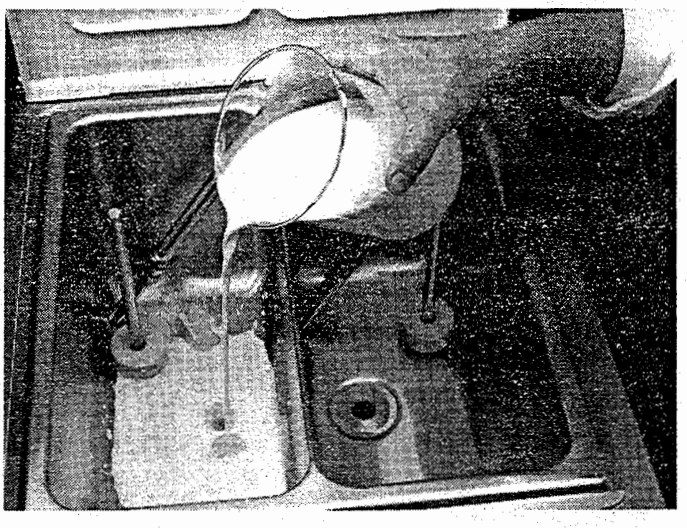
Start the machine as follows:

1) Pour 1½ pints of liquid mix (soft serve ice cream, ice milk, frozen yogurt, dietary or non-dairy mix) into a clean, sanitized measuring container.

2) Rest the gravity feed tubes upright against the side of mix tank as shown.

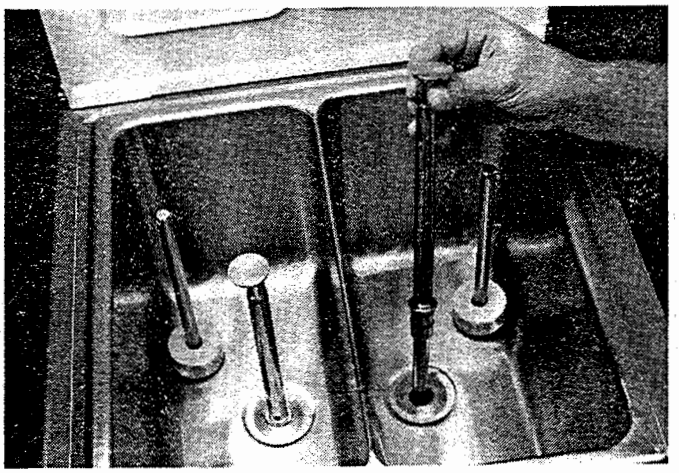


3) Pour 1½ pints of mix into each mix tank. Allow the mix to drain into the freezer cylinders. This will properly "prime" each cylinder.



SUGGESTION: When initially pouring mix into the tank, it is recommended the dispense handles be opened to allow any residual sanitizer to be "chased" out by the mix entering the cylinders. Place a cup under the dispense head to catch any residual sanitizer, 2 - 3 oz. is sufficient to purge the sanitizer out.

4) Once the pre-measured 1½ pints of mix has completely drained into the freezing cylinders, insert the gravity feed tubes into the holes at the bottom of the mix tank. Make certain the hole at the top of sleeve and tube are facing toward the front of the machine and are visible.



5) Turn the adjustment sleeve of the gravity tube until the medium sized hole for moderate production is aligned with the hole in the gravity feed tube.

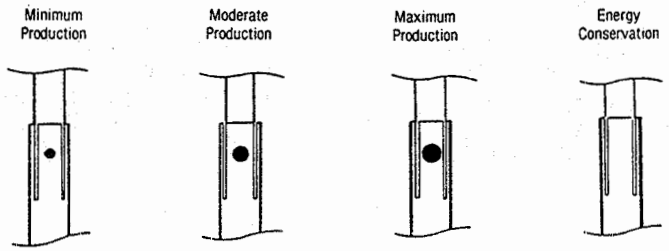


Figure 12
Gravity Feed Tube Adjustment Settings

6) Fill the tanks with mix. Total capacity is two (2) gallons each. Never fill the tanks higher than the bottom of the slots in the gravity feed tube sleeve.

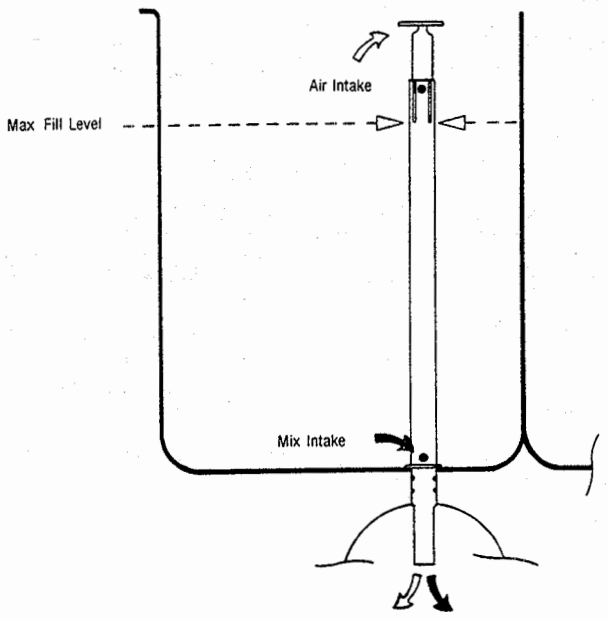
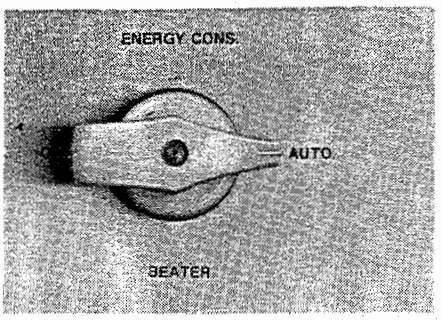


Figure 11

7) Turn the selector switch to the "AUTO" position.

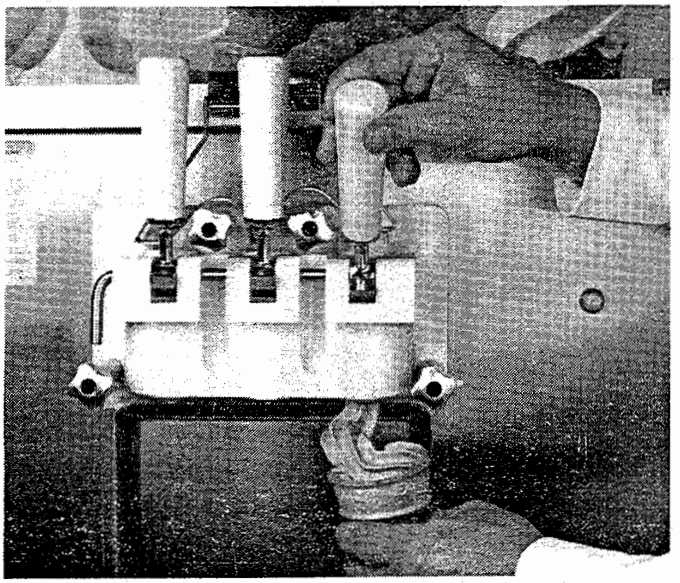


8) Initial freeze-down of the product will take 7-10 minutes dependent on the type of product being frozen.

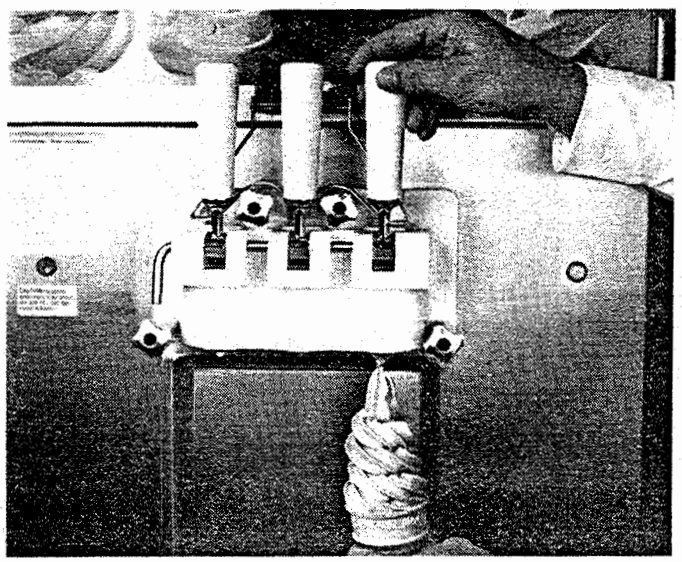
PART VII
OPERATING THE FREEZER

The machine will automatically shut-off when the product has been frozen to the pre-set "consistency". After the 7-10 minute initial freeze-down period, you will hear the beater/auger drive motor shut down indicating the product is ready to be served. The compressor will continue to run for a short period as the machine automatically directs refrigeration to the mix tanks immediately after the freeze-down cycle.

To serve, simply place a cup, container or cone under the dispensing spout and slowly pull the dispensing handle down. As the product begins to flow, move the cup or cone in a circular fashion to create a tapering tower.



When the portion is the size you want, close the handle and pull the cup or cone straight down to add a peak.



Typical portion sizes are: SMALL = 3 OUNCE SERVING
MEDIUM = 5 OUNCE SERVING
LARGE = 7 OUNCE SERVING

Gravity Feed Valve - How to Operate and Make Adjustments

The Gravity Feed Valve consists of two tubes, one sliding inside the other, and a plunger/splash guard.

The inner tube blends the flow of air and mix into the freezing cylinder. Air enters through the top of the tube and the mix, through a round hole at the base. See illustration below.

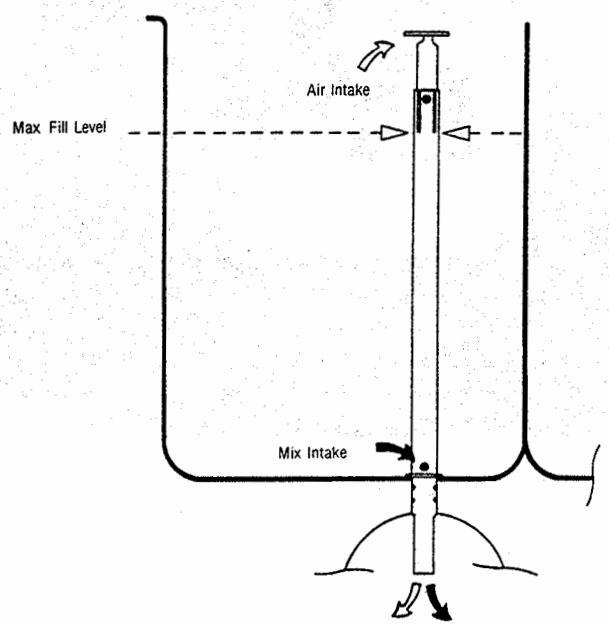


Figure 11

The outer tube is actually a valve. Rotating it from hole to hole on the outer tube varies the size of the hole and the amount of mix that flows into the freezing cylinder. The size of the air inlet, at the top of the tube, does not change so the amount of air that enters the freezing cylinder is constant.

You can vary the overrun (yield) by letting more or less mix enter the freezing cylinder by manually regulating the valve. You must align the mix inlet holes on both the inner and outer tubes or no mix will enter the cylinder. You can see this hole at the top of both tubes. See illustration below.

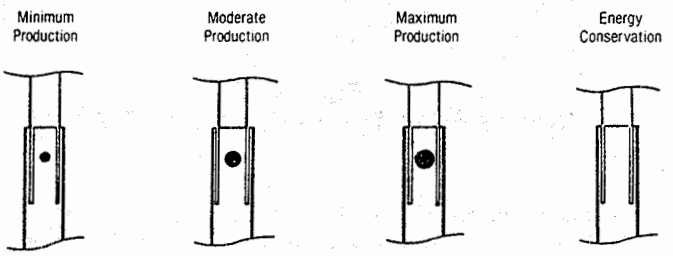


Figure 12
Gravity Feed Tube Adjustment Settings

The plunger/splash guard keeps the mix from splashing on the mix tank cover and serves as a device to eliminate potential clogging inside the tubes.

You may find it necessary to adjust the position of the outer tube in order to regulate the amount of mix entering the freezing cylinder after start-up. Actually, sales conditions will dictate the proper adjustment.

If more production is required, increase the opening by rotating the outer tube to a larger hole, and conversely when business is slow, rotate to a smaller hole on the outer tube, reducing the opening. Naturally, when the mix runs low in the mix tank, you will open the slot more and eventually take the feed tube out completely to use the last of mix in the mix tank.

Energy Conservation

During long idle periods, it is recommended the outer sleeve of the gravity feed tube be rotated to the position which closes the mix intake hole completely.

IMPORTANT: Remember to rotate the outer tube to the appropriate opening before switching to the AUTO mode.

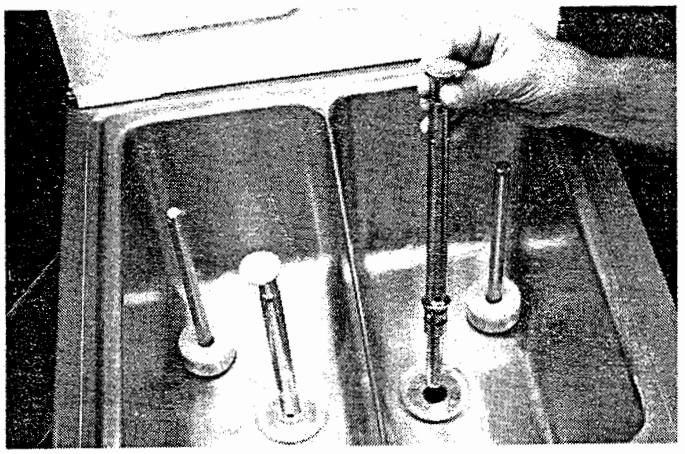
PART VIII
ROUTINE, PERIODIC CLEANING PROCEDURES

Cleaning and sanitizing schedules are governed by your State or local regulatory agencies and must be followed accordingly. A well planned cleaning schedule will eliminate excessive waste of time and product within your organization.

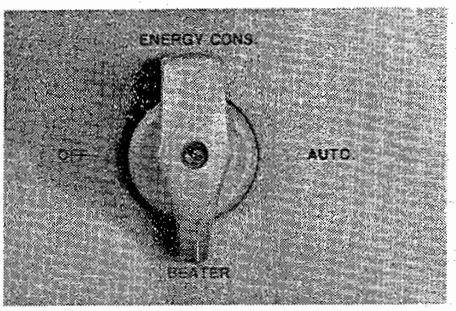
On a designated day(s) of the week, allow the mix in the mix tank to run as low as feasible.

Proceed to clean the machine, as follows:

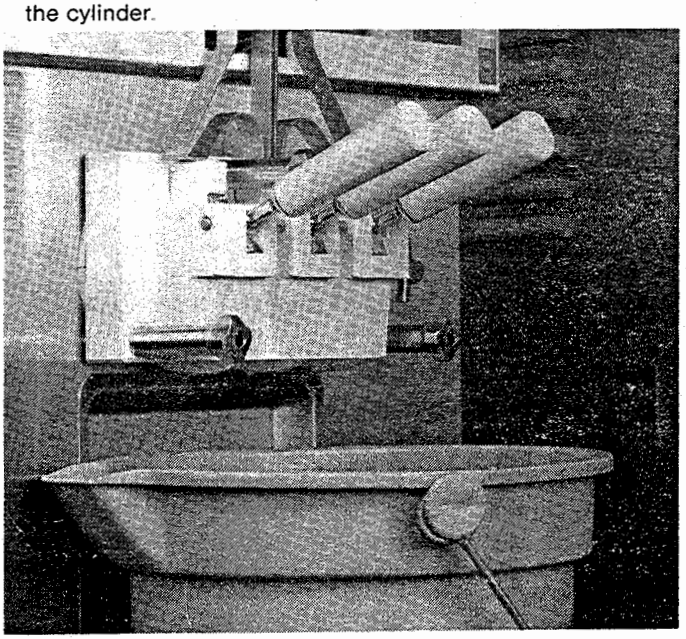
1) Remove the Gravity Feed Tubes. Pull the tubes straight up and out.



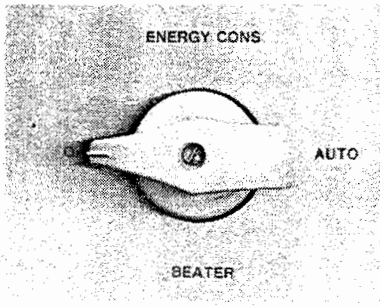
2) Turn the Selector Switch to BEATER position and let the machine run for 4 to 5 minutes. This will soften the product in the cylinder and allow the remaining product to be removed more easily.



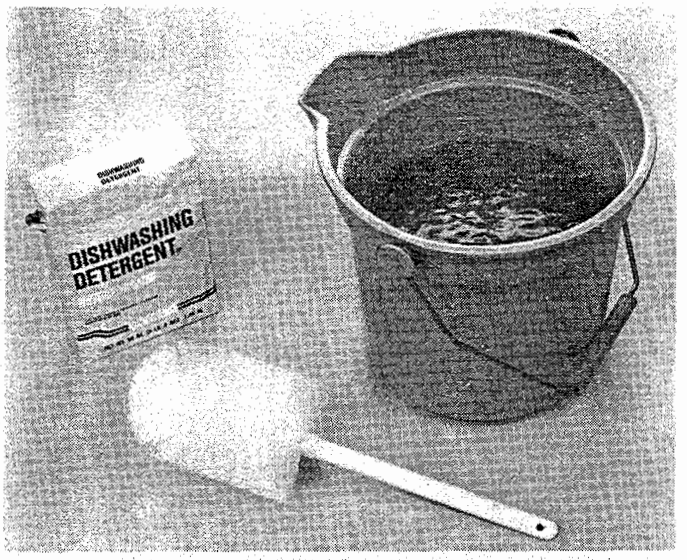
3) Place a container or bucket under the spigot head. Slowly pull the handle down and remove remaining product from the cylinder.

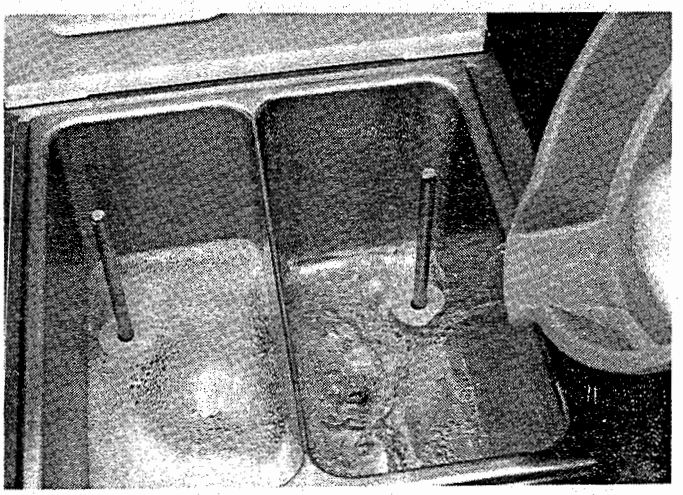


4) When the product has stopped flowing, turn the Selector Switch to the OFF position. Close the spigot handle.



5) Fill hopper(s) and cylinder(s) with cold water (a mild, non-foaming dish washing detergent is recommended).

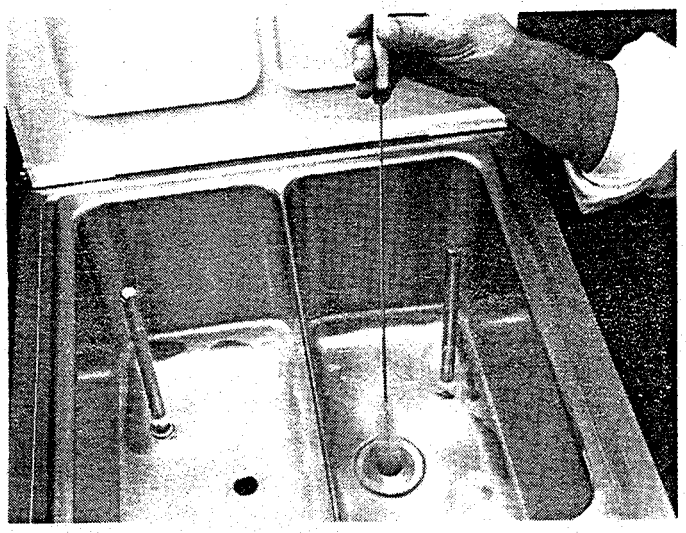




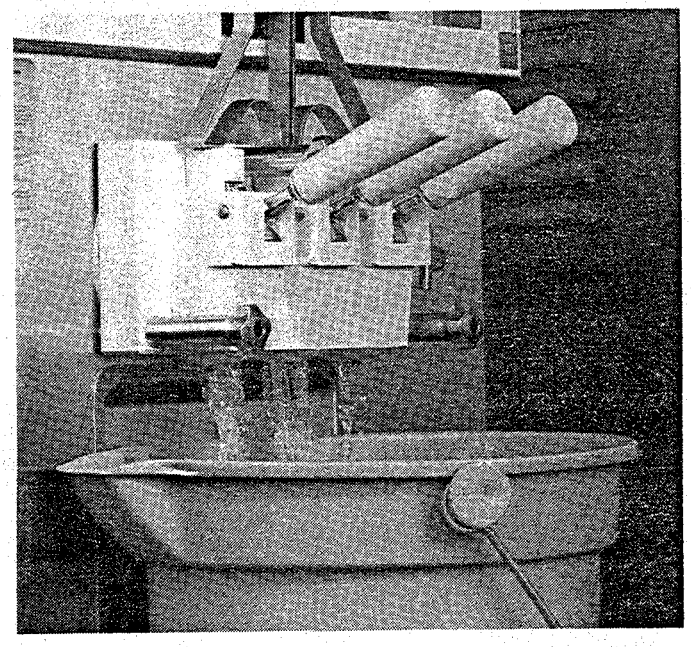
6) Turn Selector Switch to the BEATER position for one minute. Turn Selector Switch to OFF position, drain water by opening the spigot handle. Repeat this process until water is clear.

IMPORTANT: Operate unit only in the BEATER position when cleaning. Do not operate unit for excessive periods in the BEATER position, one minute intervals per rinse is recommended.

7) Brush all surface areas, with brushes provided, to remove all mix particles.



8) Drain Water:



9) Refer to Part III, "Initial Cleaning Procedure" of this manual to continue the cleaning, disassembly, re-assembly, and start-up procedures.

PART IX
TECHNICAL INFORMATION

(A) Refrigeration

Compressor - Hermetic - 1.5 hp - R502
FLA - Amperage - 6.7
Suction Pressure - 18 psig
Discharge Pressure - 225 psig @75°F ambient
Cooling System - air or water
Use R 502 only - 2.2 lbs.

(B) Beater Motor - Single Phase

H.O.M. cutout Amperage - 7.6 Amps
Overload cutout Amperage - 8.5/9 Amps
Voltage - 208-230V

1) Adjusting Product Temperature

Coldelite uses a Hard-O-Matic system which is referred to as H.O.M. This electronic device controls the refrigeration system for the freezing cylinder by 'sensing' the consistency or hardness of the product inside the freezing cylinder. No thermostats are used in this system.

The firmness of the product will depend on the setting of the H.O.M. electronic control.

The compressor must cut off when the current, absorbed by the beater motor, reaches the amperage indicated on the label in the electrical box (B/N Cut-Out Amps). By using an ammeter across the line feeding the beater motor, it is possible to check the amperage drawn by the motor. Factory pre-cutout is 8.0 Amps.

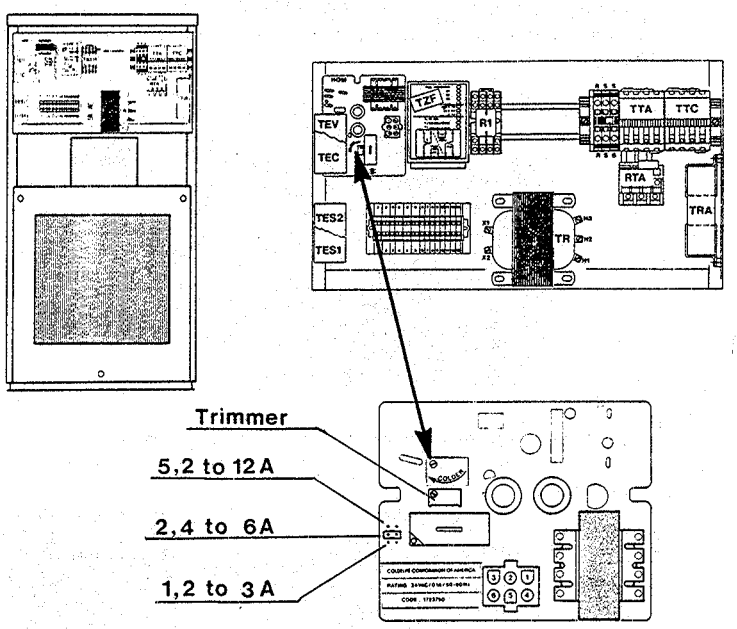


Figure 13

2) Electronic Hard-O-Matic Control Adjustment

To reduce product consistency, turn the TRIMMER adjustment, (see Fig. 13) counter clockwise.

To increase product consistency, turn the TRIMMER adjustment screw clockwise.

The electronic H.O.M. (see Fig. 13) has the possibility of working in three different ranges of amperage. Be sure that the range selected is in accordance with the beater motor amperage range. If modification is required, remove the bridge and reposition on the appropriate range. (See Figure 13).

3)	Overload Protector	Calibration
UC-113G	T25DU 7.5/11	8 Amps

Energy Conservation

Models equipped with this feature allow the operator to switch to a more economical circuit during limited service. During this mode of operation, the product and hopper temperature are controlled thermostatically. The beater motor is de-energized resulting in a substantial reduction in power input.

a) How to Operate

Turn Selector Switch to ENERGY CONSERVATION. The beater motor is completely de-energized and the temperature of the product in the freezing cylinder is controlled by the thermostat (TEC), which is set approximately at a temperature of 28°F - 30°F.

Mix Tank Refrigeration

The mix tank is provided with a refrigeration system, thermostatically controlled. (TEV).

a) How to Adjust the Mix Tank Temperature

The thermostat (TEV) has been preset at the factory to maintain a mix temperature ranging from 35° F to 40°F. The reading is taken at the center of the mix tank.

In the event further adjustment should be required, proceed as follows:

Mix tank too warm - Turn thermostat screw a half turn, clockwise.

Mix tank too cold - Turn thermostat screw a half turn, counter clockwise.

Remember you will have frost on the mix tank walls so for any adjustment beyond a one half turn in either direction, wait at least two hours to observe results.

(C) Drive System

The rotation of the beater is counter clockwise and is motivated by a belt drive system.

Spigot Switch - How It Operates (See Fig. E, Pg. 31)

A micro switch (MIR), located in the housing directly above the spigot head assembly, actuates the beater motor whenever the dispensing handle is pulled down to draw product. The Selector Switch must be in the AUTO position.

The actuating lever is preset at the factory.

How to Adjust the Front Micro Switch

Should it become necessary to take the assembly apart for any reason (see Fig. E), proper calibration must be maintained. The micro switch must engage and start the beater motor before the product is dispensed from the head. To calibrate, look through the opening at the bottom of the spigot head. Slowly pull the dispensing handle down to raise the piston in the spigot head. The micro switch must be activated (you will hear the click) before you can see the product opening (orifice) inside the head. If this opening shows before you hear the click, the adjustment screw must be raised. Loosen the lock nut under the adjustment screw and turn the screw counter clockwise. Retighten the nut after this adjustment.

PART X
MAINTENANCE

Your COLDELITE machine has been designed, engineered and manufactured to achieve high performance and long durability.

The life expectancy of a machine, any machine, does not depend only on the quality of its components and design, but also on the beneficial effects of basic maintenance procedures.

It is important to you, therefore, to become familiar with a few of these basic procedures:

1) Remove 'O' rings only with the 'O' ring extractor supplied with the machine.

2) Clean the machine according to the instructions.

3) Lubricate all 'O' rings and seals, as instructed.

4) The wearing or the improper cleaning of the beater and the pump shaft seals, will result in leakage from the rear. Check the drip chute pans frequently and replace seals, when necessary.

5) Replace any 'O' ring that has a nick in it. If not replaced, it will leak and interfere with the proper performance of the machine.

6) When all the spare parts supplied with the machine are used, re-order immediately. Do not wait until the part is required again.

7) NEVER use the AUTO position for washing, sanitizing and initially filling the freezing cylinder.

8) IMPORTANT - During the washing and sanitizing period, run the machine only for the time strictly necessary for this operation. Prolonged use of the beater in the Cleaning position may cause severe damage to the machine.

9) Always wash metal, plastic or rubber parts in lukewarm water. NEVER, NEVER USE HOT WATER!

Important

If your Model UC-113G is an air cooled machine, its efficiency depends on the air cooled condenser. The fins of the condenser must be cleaned every two or three months to assure efficiency.

Warning ⚠

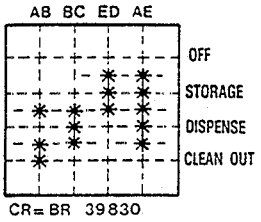
Extreme care must be taken when removing side, rear or control box panels.

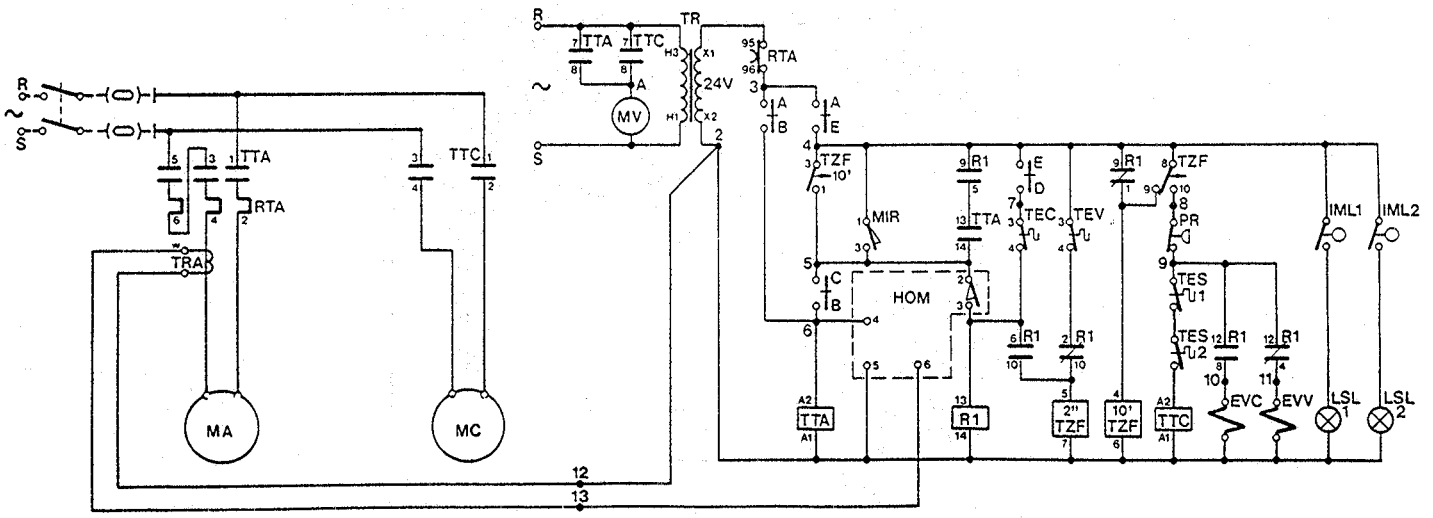
Always turn the Selector Switch to the OFF position. Also, turn off the Disconnect Switch on the electrical supply line before exposing any electrical connections and/or moving parts, such as belts, pulleys, fan blades and beater.

TROUBLE SHOOTING GUIDE

Problem	Possible Cause	Suggested Remedy
1) Product too soft	a) Drawing faster than machine can produce b) H.O.M. control out of calibration or malfunctioning c) Machine short of freon gas	a) Slow down draw rate b) Contact authorized service agency c) Contact authorized service agency.
2) Nothing comes out of dispensing head	a) No mix or low mix in mix tank b) Feeding tube setting not sufficiently opened	a) Add mix to mix tank b) Adjust gravity feed tube sleeve to larger opening.
3) Machine will not freeze	a) Restricted air or water flow b) Compressor not working c) Short of freon gas d) Malfunctioning torque control (H.O.M.) e) Malfunctioning starter f) Insufficient power supply	a) Remove obstruction or restriction b) Contact authorized service agency c) Contact authorized service agency d) Contact authorized service agency e) Contact authorized service agency f) Contact authorized service agency.
4) Machine runs continuously	a) Dispense handle not completely closed b) Front micro switch stuck in ON position c) 10 minute timer stuck in ON position d) Short of freon gas e) Restricted or excessively warm air or water flow	a) Close handle b) Readjust or replace front micro c) Contact authorized service agency d) Contact authorized service agency e) Remove obstruction or restriction.
5) Beater motor humming	a) No mix in cylinder	a) Refer to #2) above.
6) Beater motor will not shut off	a) Front micro switch activated or stuck	a) Refer to Item #4) above.
7) Machine will not start	a) No power to machine b) Malfunctioning selector switch c) Off on overload	a) Check plug, disconnect switch or fuses. Push reset button. b) Contact authorized service agency c) Push reset button after waiting for reset to cool.
8) Short cycle on machine	a) Going off on high pressure	a) Clean condenser (air cooled models) b) Malfunctioning Klixon on compressor c) Check water flow.
9) Machine smoking	a) Drive belt is slipping b) Cylinder starved	a) Turn off machine and tighten belt b) Reset mix intake tube to add more mix to cylinder. Turn machine OFF. Put selector switch on BEATER for one minute. Return to AUTO position. Resume normal operation.
10) Mix drips from rear of head assembly	a) "O" ring missing or has a split b) Head not tight	a) Install or replace "O" ring b) Tighten hand knobs.
11) Low overrun	a) Defective "O" ring. Check all "O" rings. b) Too much liquid in cylinders	a) Replace any worn or damaged "O" ring b) Close liquid hole in feeding tube, draw several portions and reopen hole.

WIRING DIAGRAM





CR - Rotary Selector Switch
EVC - Cylinder Solenoid Valve
EVV - Mix Tank Solenoid Valve
IML - Magnetic Switch - Mix Level
HOM - Hard-O-Matic Torque Control
LSL - Lamp - Mix Level Indicator

MA - Beater Motor
MC - Compressor Motor
MIR - Front Microswitch
MV - Fan Motor
PR - Pressure Control
R1 - Auxiliary Relays
TRA - Current Transformer

RTA - Overload Protector - Beater Motor
TEC - Energy Cons. Thermostat
TEV - Mix Tank Thermostat
TTA - Beater Motor Contactor
TTC - Compressor Contactor
TR - Transformer 230/24V
TZF - Timer/Time Delay
TES - Safety, Low Temp. Thermostat

PARTS IDENTIFICATION

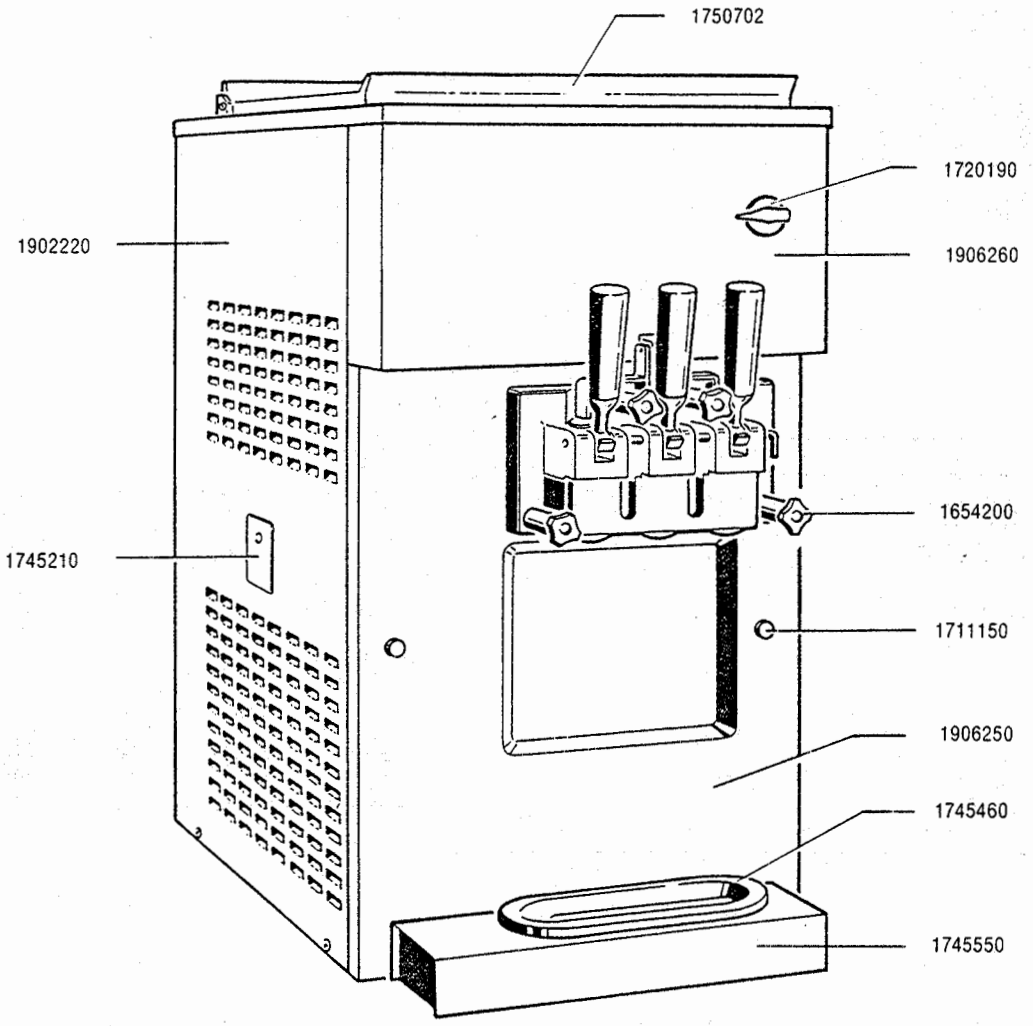


Figure A

Code No.	Description	Code No.	Description
1654200	Retaining knob for dispense head	1780350*	Front decal - std. color
1711030*	24 Volt Bulb for mix fill indicator	1902220	Left side panel
1711150	Cap/Lense - Orange	1903210*	Right side panel
1720171*	Knob for selector switch	1904280*	Upper rear panel - water cooled models
1720190	Selector switch-complete	1904290*	Upper rear panel - air cooled models
1745210	Plastic drip chute	1905240*	Lower rear panel - water cooled models
1745460	Plastic drip tray cover	1905250*	Lower rear panel - air cooled models
1745550	Stainless steel drip tray bracket	1906250	Lower front panel
1750702	Mix tank cover	1906260	Upper front panel
		5556310*	Front decal - self service Option

*Not pictured

PARTS IDENTIFICATION

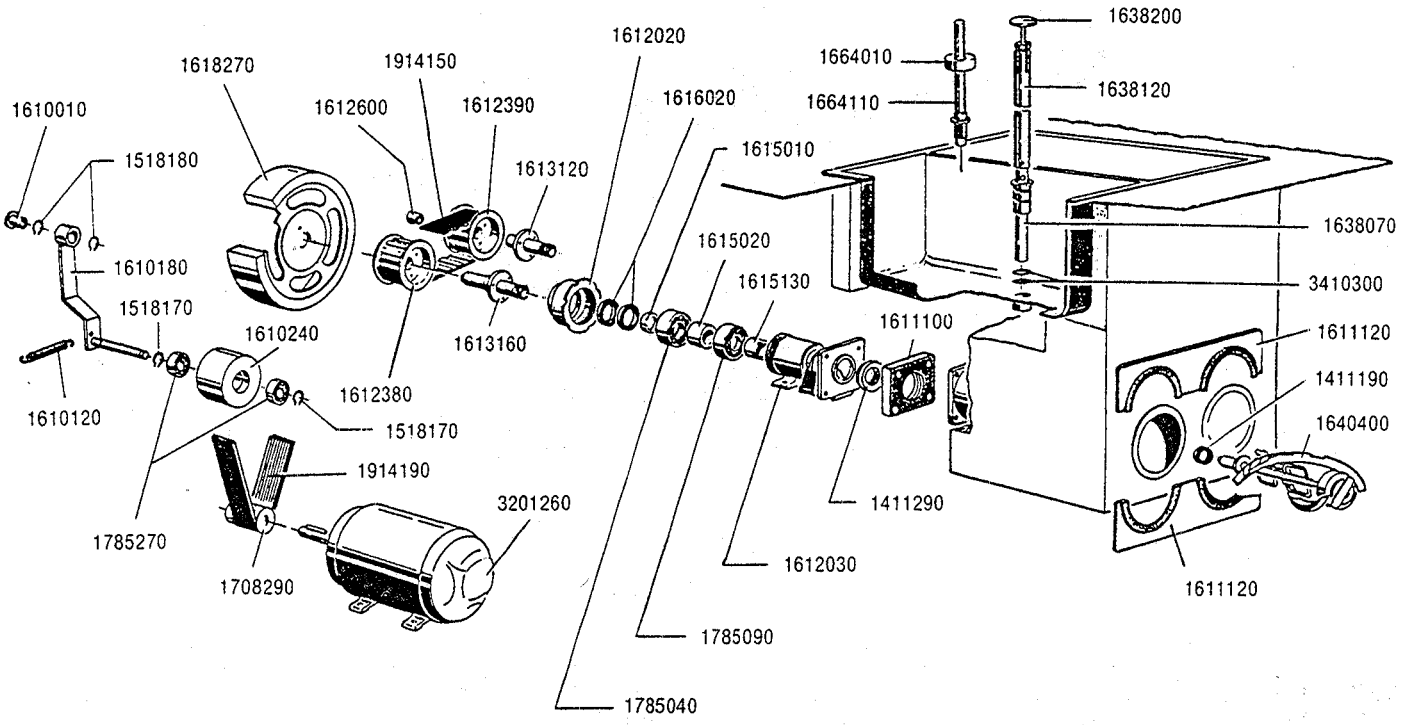


Figure B

Code No.	Description	Code No.	Description
1411190	Rubber beater - lip seal	1615020	Ring spacer, trans.
1411290	Gear box seal	1615130	Ring nut, trans. housing
1518170	Snap ring	1616020	Seal, drive shaft
1518180	Snap ring	1618270	Flywheel
1610010	Bushing for tension arm	1638070	Gravity feed tube
1610120	Belt tension spring	1638120	Gravity tube sleeve
1610180	Belt tension arm	1638200	Splash guard, gravity tube
1610240	Belt tension pulley	1640400	2E beater, short
1611100	Plastic rear gasket	1664010	Float, mix fill ind.
1611120	Plastic front gasket	1664100	Stem, float control S/s
1612020	Cover, trans. housing	1708290	Pulley, drive motor
1612030	Base, trans. housing	1785040	Ball bearing
1612380	Drive pulley, trans.	1785090	Ball bearing
1612390	Driven pulley, trans.	1785270	Ball bearing
1612600	Bushing, driven pulley	1914150	Belt, trans.
1613120	Trans. shaft, driven side	1914190	Belt, drive
1613160	Trans. shaft, drive side	3201260	Drive motor, 1.8 H.P.
1615010	Ring spacer, trans.	3410300	O-ring, 113

PARTS IDENTIFICATION

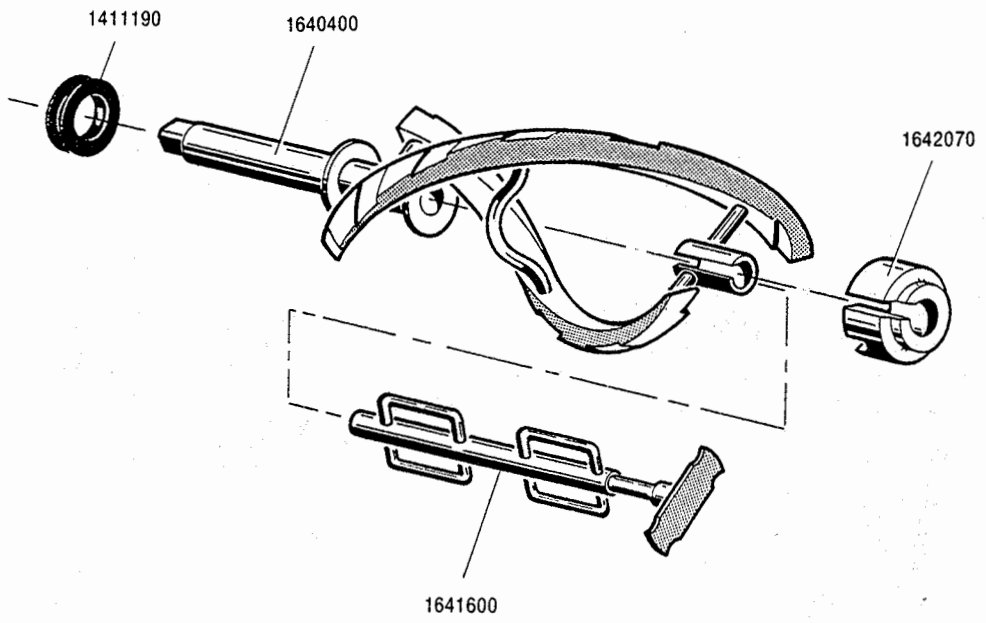


Figure C

Code No.	Description	Code No.	Description
1411190	Beater seal	1641600	Idler, for "2E" beater
1640400	"2E" Beater, seal	1642070	End pusher, for "2E" beater

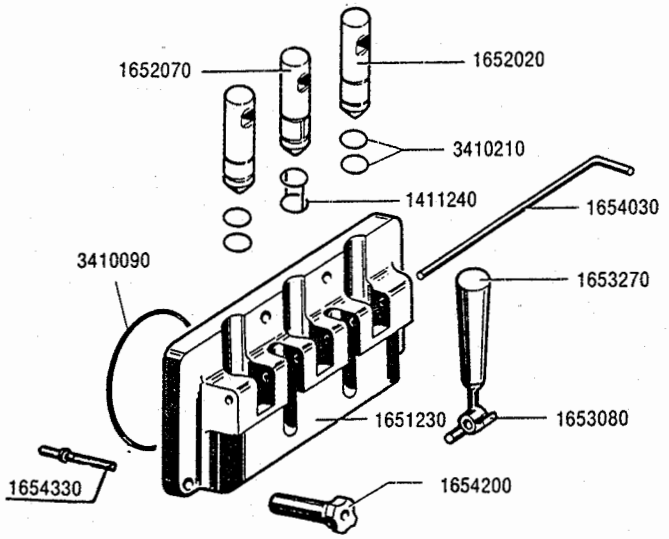


Figure D

Code No.	Description	Code No.	Description
1411240	Center piston O-ring	1653270	Dispense Handle
1651230	Dispensing/Spigot heady body	1654030	Handle retaining rod
1652020	End piston	1654200	Retaining knob, dispense head
1652070	Center piston	1654330	Stud, dispense head retaining
1653080	Piston activating cam	3410090	O-ring, 342
		3410210	O-ring, 215

PARTS IDENTIFICATION

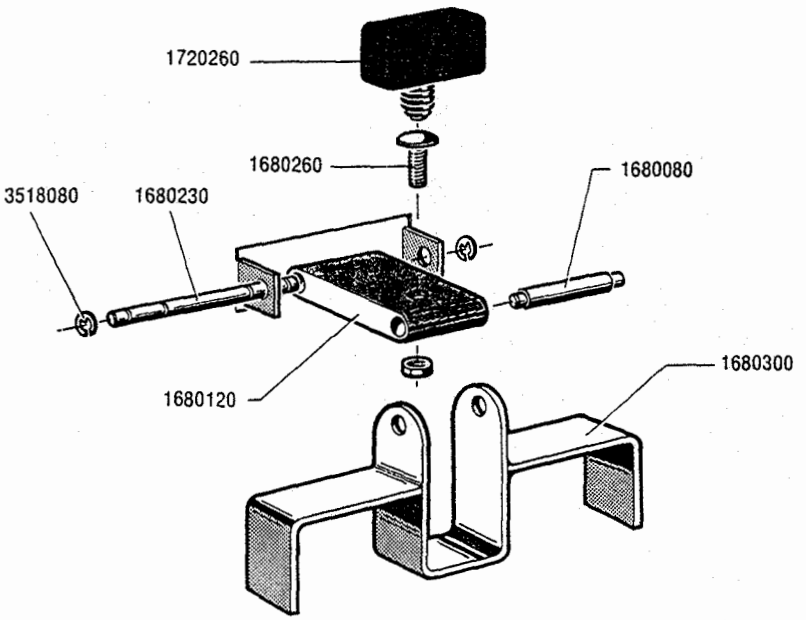


Figure E

Code No.	Description	Code No.	Description
1680080	Nylon pin, front micro cam	1680260	Adjustment screw, front micro
1680120	Cam, front micro switch	1680300	Activating lever, front micro
1680230	Pivot shaft, front micro cam	1720260	Microswitch, Burgess e BR
		3518080	Snap ring

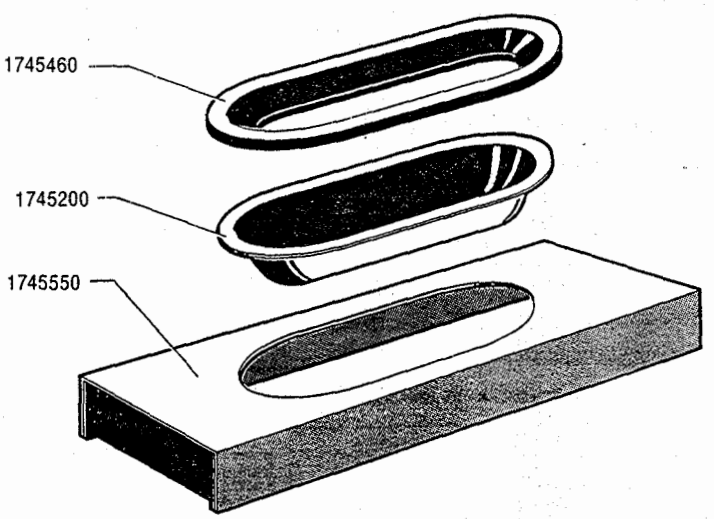


Figure F

Code No.	Description
1745200	Front drip tray
1745460	Cover, front drip tray
1745550	Bracket/Console, front drip tray

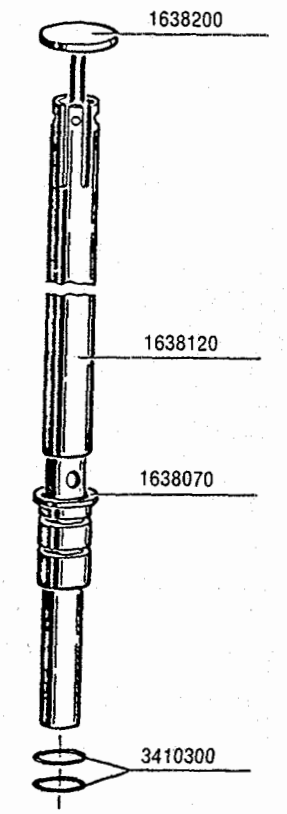


Figure G

Code No.	Description
1638070	Gravity feed tube
1638120	Sleeve, gravity feed tube
1638200	Splash guard, gravity feed tube
3410300	O-ring, 113

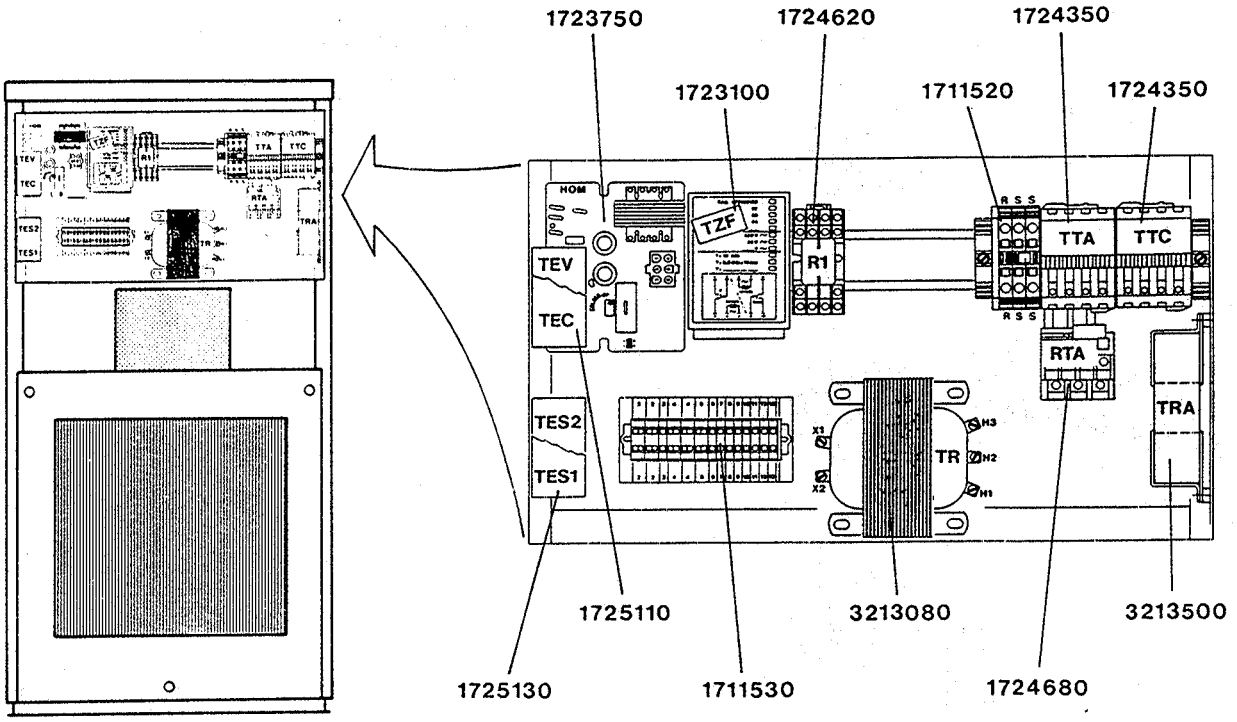


Figure H

Code No.	Description	Code No.	Description
1711520	Terminal block, 220V (individual block)	1724620	Relay, mini-mod 55/34 24 Volt
1711530	Terminal block, 24V (individual block)	1724680	Overload, 7.5/11 Amp.
1723100	Timer, fiber 24 Volt	1725110	Thermostat, Danfoss
1723750	Hard-o-matic torque control, electronic 24 Volt	3213080	Transformer, Dongan 230/24V
1724350	Contractor, 24 Volt	3213500	Current transformer

Spare Parts Not Pictured

Code No.	Description	Code No.	Description
1540130	Spatula	1740340	Fan motor mounting bracket
1540140	O-ring extractor	1745320	Button/screw, front drip tray bracket
1720070	Rubber seal for selector switch 1720...	1990430	Rubber cover, expansion valve
1720370	Reset button	3201260	Beater motor, 1.8 H.P., 208/230/1
1723770	H.O.M. bridge	3203110	Fan motor, 230/60/1 - 1/6 H.P.
1724400	Auxiliary contact for 1724...	3250120	Klixon
1724621	Socket for relay 1724620	3250370	Running capacitor for 3301290
1724800	Coil, 24 Volt for 17272...	3250440	Starting capacitor for beater motor
1727270	Solenoid - 24 Volt	3250450	Running capacitor for beater motor
1727280	Valve body, solenoid	3301290	Compressor, 220/60/A, 1.5 H.P.
1727570	Expansion valve - thermostatic, Danfoss	3304100	Water valve - 3/8"
1727800	Nozzel #2 - for 17275...	3304280	Valve rotolock for 3301290
1730010	Water condenser	3305150	Liquid indicator
1731210	Air condenser	3305210	Filter dryer
1731290	Air condenser shrowd	3306390	Pressure control - 250/380 lbs.
1740120	Fan blade	3310100	Capacitor & relay assy. for 3301290
		3540110	Petro-Gel sanitary lubricant